THE IDENTIFICATION OF KEY VARIABLES WHICH IMPACT ON PATRON DEMAND AT MAJOR SPECIAL EVENTS

BY

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2. BACKGROUND

The development of this project was based on a perceived need to develop the basis of a 'predictive patronage model' which could be used in the special events industry. After a preliminary literature review and subsequent discussion with industry experts, it became apparent that there was no standard industry approach to the projection of patronage in the Australian special event industry.

As a result of this observation, International Event Resources (IER), a major company in the management of major special events was approached. After initial discussions held with the managing director of IER, Mr John Kroeger and Mr Leo Jago, Lecturer in Tourism at Victoria University of Technology, it became clear that little work had been done to quantify the impact on patronage of key variables. It was also apparent that companies such as International Event Resources did in fact have a need for the results of such a research study, as current patronage projections were for the most part, based on experience and comparisons with previous events.

3. RATIONALE

The special event market in Australia has grown in both size and importance to the Australian economy in recent years. The introduction of new major international events like the Adelaide Grand Prix, Eastern Creek Motorcycle Grand Prix, Gold Coast Indy Car, Australian International Air Show, Australian Open Tennis as well as established, and 'one off' events like the America's Cup Challenge and Southbank project have opened the Australian tourism industry to the benefits of hosting major special events.

As a result of the introduction of such events, a number of research studies have been conducted into their economic impact. The majority of these studies have been based on an assessment of economic impact that these events have on their host economies. Further, these studies have focussed on impacts rather than projections, leaving Australian promoters and organisers of these events still tending to base patronage projections on mainly 'gut feel' patronage estimates, rather than on more scientific basis.

The author suggests that by gaining an understanding of the impact of key variables on patronage at major special events, it will not only enable

more accurate economic impact forecasting to be carried out, but it will also enhance the accuracy of decision making for future events in areas such as:

i) Operations - facilities, transport, service supply, accommodation, communications.

ii) Marketing - ticketing, corporate sponsorship, promotions.

iii) Administration - cash flows, profit/loss projections, human resources.

Therefore, it is hoped that this research, will provide many valuable insights into the projection of special event attendances. This insight will not only help to fill a gap in relevant research, but also help the future management of special event planning.

4. METHODOLOGY

i) LITERATURE REVIEW

OBJECTIVE - Clarify exactly what research has been carried out in the area, analyse and synthesise relevant data, and assess the 'information gaps' in the research.

METHOD - Collect all related research in various databases.

ii) THE CLARIFICATION AND IDENTIFICATION OF CONCEPTS AND VARIABLES.

CONCEPTS - What is a major special event?

What are the major variables which allow the accurate projection of major special events patronage?

VARIABLES - The level of patronage has been identified as the dependant variable, and independent variables will be located.

METHOD - Survey industry experts in order to gain a collection of variables which are perceived to be important in the projection of special event patronage.

LIMITATION - Access to chosen sample will be limited by the nature of the special event industry in Australia, as there are relatively few people who have an expert working knowledge in the area of special events.

iii) OBJECTIVE

In order to answer the research questions listed above, the following objective will be established:

a) The identification and statistical analysis of key variables which impact on patronage at major special events, will help the accurate forecasting of patronage predictions.

iv) IDENTIFY APPROPRIATE APPLICATIONS OF STATISTICAL ANALYSIS.

METHOD - Analyse all relevant statistical approaches to the forecasting of patronage at major special events. This review will include the analysis of Multivariate Data Analysis, Multiple Discriminate Analysis, and Canonical Correlation Analysis.

v) ANALYSIS AND DISCUSSION OF RESULTS

Results of the research can be analysed in order to gain insights into both their significance and application to future special event management.

vii) RECOMMENDATIONS FOR FURTHER RESEARCH DEVELOPMENT

Recommendations will be made for future research needs and development. The limitations of the research will be recognised in order to gain a clear understanding of the requirements of further research.

5. FACILITIES AND EQUIPMENT UTILISED IN THE STUDY

Computer based facilities and applications, included:

- Statistical Analysis Softwares (SAS, SPSS)

- Spreadsheet based Software (Lotus 123)

- Database Software (Dbase)

- Word Processing Software (Word Perfect 5.1)

- Graphics Software (Harvard Graphics 3.0)

6. MAJOR SPECIAL EVENTS - SCOPE AND NATURE

6.1 Special Event Definition

The definition of a special event, like many concepts, is by no means clear or unchallenged in its conceptual nature. As with most concepts, its definition will be predominantly shaped by the context in which it has been portrayed, therefore adding to the ambiguity of the problem.

However, as a tourism product, and the object of this study, the concept of a special event needs to have a clear and meaningful definition in order to be appropriately analysed. Special events, as products in the tourism industry, can be separated from 'other' events by using a number of specific factors.

> "Anthropologists recognise three basic human physical needs that have existed since the beginning of humankind: food, clothing, and shelter. Just as basic however, and perhaps even more vital to the substance of the human spirit, is the emotional need to celebrate. Today private citizens, public officials, associations and corporations are recognising and responding to this ancient need in many new and innovative ways through the use of special events." (Goldblatt, 1990;1)

Donald Getz (1989;125) describes a special event as 'a unique form of tourism, ranging from mega-events such as the Olympics and World Fairs, through community festivals, to programs of events at parks and facilities. Their special appeal stems from the innate uniqueness of each event, which differentiates them from fixed attractions, and their 'ambience', which elevates them above ordinary life.'

Alternatively, Brent Ritchie (1984;2) describes a special event as being; 'major one time or recurring events of limited duration, developed primarily to enhance the awareness, appeal and profitability of a tourism destination in the short and/or long term. Such events rely for their success on uniqueness, status, or timely significance to create interest and attract attention.'

To further the analysis, the National Task Force on Tourism Data, Canada (1986) determined that a special event was a 'celebration or display of some theme to which the public is invited for a limited time only, annually or less frequently.' The task force then went further by developing criteria upon which a special event could be distinguished from other types of attraction.

This criteria included:

* special events are open to the public;
* their main purpose is the celebration or display of some theme;
* they occur once a year or less frequently;
* there are predetermined opening and closing dates;
* permanent structures are not owned by the event;
* the program consists of one or more separate activities;
* all activities take place in the same community or tourist region.

Foster, Mill and Morrison (1985) believe that a special event as a product, features variables which set them apart from other events. The special event product:

* cannot be inspected in advance (except via repeat visitation);
* cannot be stored (wasting surplus capacity);
* must commit resources prior to the event;
* is largely intangible;
* is of a fixed quantity (new events can not easily be created for an excess in consumer demand);
* is an amalgam of services and tangible products (including entertainment, food, souvenirs, accommodation);

* is difficult to package (events are seldom linked to holiday packages);
* is subject to heterogeneous demand and adverse changes in demand, due to external forces;
* is often smaller in scale, and dependant on intermediaries for promotion and delivery;
* is similar to other tourism products, like scenery, in that consumption can often be free;
* cannot be standardised, even from year to year (however this may be also seen as a strength).

Burns and Mules (1986) define a special events as a 'one off occurrence or, by extension, an infrequent occurrence with a few characteristics.' For the mostpart, these include:

1. The major demand generated by a special event is primarily not the demand the events draws itself, but rather the demand for a whole range of connecting services. These may typically include demand for accommodation, food, transport and other related services.

2. Demand is condensed into a short period of time, and services cannot be produced ahead of time, leading to 'peaking' problems in these service related industries.

3. 'Peaking' influences both the level and the distribution of benefits received.

4. Net impacts of the redirection of local funds toward a special event will be relatively minor. Major benefits tend to be realised from the attraction of new funds from outside the region.

Burns and Mules believe that it is these characteristics of a special event which separate a special event from a 'non-special' event, and therefore an event which was special would typically involve a substantial initial capital cost and generate ongoing net benefits. These benefits would build over a substantial period of time, while many of the costs would be accrued immediately.

Brent Ritchie, a prolific author on special events, and a 'recognised expert' in the research into/of special events, classifies 'hallmark', or special events into seven main categories. These categories include;

world fairs/expositions (ie Expo 88), Unique carnivals and festivals (ie Adelaide Festival), Major sporting events (ie Adelaide Grand Prix), Significant cultural and religious events (ie Melbourne Papal tour), Historical milestones (ie Australian Bicentenary), Classical commercial and agricultural events (ie Australian International Air Show, The Royal Melbourne Show) and Major political personage events (ie Major political leadership conventions).
(Journal of Travel Research, 1984 (2))

Although the above definitions have a high degree of variation in their interpretation of what constitutes a special event, certain elements remain constant in the relevant literature. Most important of these is the reinforcement of the concept of the "specialness" an event must encompass to be deemed a special event. A special event is a phenomena which cannot be narrowly defined, as the events themselves vary substantially in both nature and scope.

Therefore, when defining a special event, it is necessary to take a broad view of what it's definition will encompass. Of all the above listed definitions there are certain points of commonality which can help to derive a sensible and workable definition of a special event. Joe Jeff Goldblatt (1990;1) provides a definition in such a manner:

"A special event recognises a unique moment in time with ceremony and ritual to satisfy specific needs"

This definition is then clarified by the distinction between a daily event and a special event:

Daily Events

- Always occur spontaneously
- Do not arouse expectations
- Usually occur without a reason

Special Events

- Are always planned
- Always arouse expectations
- Are usually motivated by a reason for celebration

6.2 Definition of a Major Special Event

The focus of this study is based upon the forecasting of patronage at 'major' Australian special events. As there are literally thousands of events based in Australia which could comfortably be accommodated by the above definitions of a special event, it is therefore necessary to limit the nature and scope of these events for this study.

Major special events are the new 'image builders' of modern society. In previous years such image building was usually facilitated by the erection of large span bridges and superdams. However in contemporary society, consistent with the maturation of the economy and switch in emphasis from secondary to tertiary (service) industries, major special events like a Grand Prix or the America's Cup Challenge, capture the imagination of society. (Getz, 1991)

These major special events have begun to dominate both the natural and physical features of many of the world's cities. Examples of this imagery can be seen in the identification of modern cities, like New Orleans with it's Mardi Gras, and more recently, Perth with 12 meter yachts. (Burns, Hatch, Mules, 1986.)

As this study is focussing on major Australian special events, the definition and scope of the term 'major' must be established. Because there is a high level of variance between the type of special events which are available for analysis, the classification of the concept of a major special event will have to be broad and simple in its nature. As noted earlier by Getz (1991), it is the uniqueness a event translates upon society that makes it special.

For this study it has been decided that the definition of a major special event in this study will, in essence be based upon the size of the event in terms of the level of patronage it is able to attract. This level of patronage will be calculated over the entire duration of the event, and should exceed 70,000 patrons. A cut off figure of 70,000 patrons allows the researcher to only analyse those events which have a significant impact on the Australian economy, and are therefore in most cases, prior topics of research.

This definition allows the research to limit the classification of events into a workable number. It is also helpful as the majority of smaller events do not have the recorded data necessary to complete this analysis.

Similarly, it is possible to draw from the above discussion of special events to conclude that a major special event must:

i) be of international standard, (ie internationally recognised).

ii) be a visitor generator, (able to generate both international and interstate visitors and/or competitors).

iii) be able to provide significant international/interstate exposure, (ie electronic media).

iv) have an established organisational structure, (ie sufficient financial resourcing).

v) have an adequate marketing plan/strategy, (ensure promotional potential is realised).

vi) demonstrate ongoing tourism benefits, (generate future tourism benefits for the hosting state or territory).

Therefore, the object of this study will be concerned for the mostpart with large, publicly subsidised, special events. These events will be expected

to generate large widely distributed external benefits, with costs usually so substantial that they require public subsidies to support them. Examples of these type of events would include; the America's Cup, Adelaide Grand Prix, Adelaide Festival of the Arts, Eastern Creek Motorcycle Grand Prix, Australian International Air Show, Gold Coast Indy, Melbourne Cup Carnival, Australian Tennis Open, and the opening launch of the Southbank redevelopment in Queensland.

TABLE 1

EXAMPLES OF RECENT AUSTRALIAN MAJOR SPECIAL EVENTS

YEAR	NAME OF EVENT	TOTAL PATRONAGE
1986	AMERICA'S CUP DEFENCE	930,600
1989	SOUTH BANK LAUNCH	913,000
1989	AUSTRALIAN MOTORCYCLE GP	92,618
1990	ADELAIDE FESTIVAL	582,000
1990	AUSTRALIAN OPEN TENNIS	312,000
1991	GOLD COAST INDY GP	117,000
1992	ADELAIDE FORMULA ONE GP	250,000
1992	AUSTRALIAN INT'L AIRSHOW	220,000
1992	MELBOURNE CUP CARNIVAL	210,000
1993/94	VINCENT VAN GOGH EXHIBITION	*120,000
1986	CANBERRA FESTIVAL	350,000

* Pre event estimate

NOTE: Caution should be applied when interpreting these patronage figures, as prediction methodologies often substantially differ, (as noted throughout this document).

(Above listed data has been sourced from reports listed in the References)

7. THE ROLE OF PLANNING AND EVALUATION

As described earlier, there has been a high level of growth in both the development and need for financial and economic evaluation of major special events. The role of planning has therefore become essential to the prospective event organiser. Michael Hall (1990) describes the role of planning as being an 'ordered sequence of operations designed to lead to the achievement of either a single goal, or to a balance between several goals'.

Therefore the planning of a major special event has to 'be concerned with anticipation and regulation of the impacts of the event on the host community, and the promotion of associated development in a manner which maximises short and long term economic, environmental and social benefits.' (Hall, 1990A;3)

Getz (1991) noted that 'evaluation steers the entire planning and marketing process. It is the way to constantly learn more about the organisation's environment, or the events.... potential market, the intended and unintended outcomes of events, and the way in which to improve the event'.

Getz notes several practical reasons for the evaluation of an event;

* Identify and solve problems
* Finds ways to improve management
* Measure success or failure
* Identify costs and benefits
* Identify and measure impacts
* Satisfy sponsors and authorities
* Gain acceptance, credibility and support.

The potential of major special events for economic growth and regional development has been realised by both government and private industry around the world. 'However in the rush to catch the tourist dollar relatively little thought is generally given to the nature of the planning process with which to maximise the benefits of tourism for the host community.' (Hall, 1990;2)

Large publicly funded special events often involve the allocation of many millions of dollars from the public purse. A good example of this can be found in the Adelaide Grand Prix in 1985, where the event absorbed capital grants of $5 million from the Federal Government and $1 million from the State Government. (Burns, 1986)

With the amount of public funding required by a major special event in mind, it is therefore not difficult to realise the importance/need for accurate planning and evaluation of special events, (ie economic and social impact statements).

Therefore, it is essential that neither government nor event developers fail in the planning process. If such planning fails to meet community expectations, the event is in risk of developing negative attitudes which can not be afforded, 'either politically or financially.' As stated by Murphy (1985;153):

> 'Tourism, like no other industry, relies on the goodwill and cooperation of local people because they are part of the product. Where development and planning does not fit in with local aspiration and capacities, resistance and hostility can raise the cost of business or destroy the industries potential altogether.'

Moreover, it must be seen as essential that careful and extensive consideration is given to the planning process for the successful host of a major special event. This will be achieved through both the maximisation of financial returns from the investment in tourism infrastructure, and the minimisation of potential negative impacts on host communities. (Hall, 1990)

Table two lists some of the major factors that need to be considered when planning major special events:

TABLE 2

FACTORS IN THE PLANNING AND IMPACT PROCESS OF MAJOR SPECIAL EVENTS

GOALS	What are the economic, environmental and social goals of the event, and how do they fit in the planning process?
SIZE	Size will be a major consideration. Does the host community have the tourism infrastructure? How many people will the event attract?
LENGTH OF EVENT	Event length is crucial in the estimation of impacts. The longer the event, generally the more social disruption created by the event.
FREQUENCY	Planning procedures for a one-off event will be different to events held at regular intervals. One-off events may lead to 'fast track' planning, while recurring events may be incorporated in formal planning structures of host communities.
LOCATION	Location has certain environmental, infrastructural & social elements that need to be included in planning. Carrying capacities are often a good research tool.
TRANSPORT	How many visitors are transported to and from event?
MARKET SEGMENT	Different events attract different market segments. What are the characteristics of those attracted to major special events?
ADMIN\ COORDINATION	How can inter and intra-governmental relations be enhanced to improve planning/coordination of the event? How can private industry and community communication be enhanced to smooth the event's operation?
I/STRUCTURE	How can existing infrastructure be maximised? What level of new infrastructure is required? What will be the use of infrastructure after the event?

Adopted from Hall 1990.

8. IMPACTS OF MAJOR SPECIAL EVENTS

Australia was the world's fastest growing tourist destination during the decade spanning the 1980's. Growth in inbound tourism to Australia doubled to reach 2.2 million between the years 1985 and 1988; representing a growth rate five times the increase in arrivals worldwide. At the same time domestic tourism has grown at a more 'moderate' level of approximately 2% since the mid 1980's. (Commonwealth Department of Tourism, 1992)

There is no doubt that major special events played an important role in shaping the country's image, and attracting foreign visitation. Because of this, government at local, state and federal level, have been active in the planning, support and promotion of such events.

A major report titled 'Directions for Tourism - A discussion Paper', was released in 1988 which saw fit to include special events separately in a section titled 'The Arts and Special Events'. (Getz, 1991) This highlighted the perceived role special events were held to play in the future development of the Australian tourism industry.

Similarly, Tourism Victoria in the release of the document, 'A New Future for Victorian Tourism', (1993;10-11) identified special events as one of the six strategic issues which had to be addressed if Victorian tourism was to reach its true potential.

One of the key strategic issues in the above listed report titled, 'Developing special events, conventions and exhibitions, and the associated infrastructure', noted that;

> ' Special events, conventions and exhibitions are capable of attracting large numbers of intrastate, interstate and international visitors, ranging from families to business groups. Victoria is missing out on the opportunities for growth in this market, partly through a lack of product, promotion and distribution, and partly through inadequate infrastructure. For example, there has been little recent change in Victoria's exhibition trade, while that of Sydney has grown significantly since the opening of new facilities at Darling Harbour.'

During the 1980's there has been a 'proliferation' of major special events in Australia. Events like the 1982 Brisbane Commonwealth Games, the annual Adelaide Grand Prix, the Motorcycle Grand Prix provide just a few examples.

In addition to this, there have also been several unsuccessful attempts to gain the Olympic Games for Australia; one by the Brisbane City Council and one by Melbourne for the 1996 games. As well as these events, there was also a dramatic increase in the number and size of artistic and cultural events, with the Adelaide Festival providing the obvious example.(Carol, Donohue, 1991)

There has been a growing level of awareness developing in Australia in regard to the potential benefits, and to a lesser extent costs, which can be derived from the organisation of major special events. At the same time, there has been a growing appreciation and understanding of the role these events can play in achieving desired social and economic goals for the general community. (Rey, 1986;36)

The following table provides a summary of the positive and negative impacts major special events can have upon the hosting community:

IMPACTS OF MAJOR SPECIAL EVENTS ON HOST REGION

TYPE OF IMPACT	POSITIVE	NEGATIVE
Economic	Increased expenditure Creation of Employment Increase of labour supply Increase in standard of living	Price increases Real estate speculation Failure to attract tourists Inadequate capital Low estimate of event cost
Tourism/ Commercial	Increased awareness - tourism Increased potential for investment and commercial activity Creation of new accommodation & tourist attractions Increase in accessibility	Poor reputation - inadequate facilities, improper practices and prices Negative response from existing enterprises due to new competition
Physical/ Enviro	Construction of new facilities Improve local infrastructure Preservation of heritage	Environmental damage Changes in natural process Architectural pollution Destruction of heritage Overcrowding
Social/ Cultural	Increase in permanent level of local interest in event activity Strengthening of regional values and traditions	Commercialisation of personal/private activity Modification of event to cater for tourism activity Potential increase in crime Change in community structure Social dislocation
Psycho/ Logical	Increased local pride/community spirit Increased awareness of non-local perceptions	Defensive attitudes in host communities Varying degrees of host/visitor hostilities
Political/ Admin	Enhanced International recognition of region & values Development of skills among planners	Economic exploitation of local population to satisfy political ambitions Distortion of events nature to reflect political values Use of event to legitimate decision making and political ideology

Most major special events have had an element of their justification based on the value they create via the attraction of both international and domestic tourists. In 1985 the Department of Sport, Recreation and Tourism noted that;

> 'Special celebrations (such as increased emphasis on Australia Day) international expositions.... all have their part to play in encouraging knowledge of, and pride in, national achievements - in turn, they affect tourism and, consequently, employment and the national economy' (DSRT, 1985)

Due to these impacts, major special events have become a substantial component of the tourism development and marketing strategies of many governments, both state and federal. These benefits create a 'window of opportunity' for state governments to capitalise on such activity in their respective tourism industries.

> 'A centre or region which hosts a major event attracting global attention is affected in many positive and negative ways. From a tourism perspective, perhaps the major benefit sought by organisers are increased awareness and a enhanced image for the host region in the international marketplace. It is assumed that this increased awareness and enhanced image will, over the long term, provide a stronger competitive position and greater benefits from

tourism.' (Ritchie & Smith, 1991:3)

An example of this perceived benefit which can be generated by a special event is demonstrated by the City of Melbourne's recent bid for the 1996 Olympic Games. The Melbourne Olympic Committee (MELOC) was established in order to co-ordinate the planning that was associated with the bid, and was granted a budget of $18.5 million. It was obvious that for a city to hold a special event of the magnitude of an Olympic Games, enormous gains could be yielded. (Downey, 1991)

The level of impact created by the staging of an Olympic Games can be seen in the example of Los Angeles, 1984. Although not comparable to a Melbourne bid, the Los Angeles economy benefited substantially, with over 43 million visitors spending US$9 billion in that year. The event itself attracted 2.5 billion televised viewers and over 600,000 visitors staying for an average of six days. (Downey, 1991)

Similarly, KPMG Peat Marwick reported that the attainment of the proposed Sydney 2000 Olympic Games would bring $7.3 billion into the Australian economy, of which $3.5 billion would go directly to Sydney. The company also predicted that 195,088 jobs would be created as a direct result of Sydney holding the 2000 Olympic Games. (The Age,

1993)

Major special events like the Olympic Games and relatively smaller events (ie Australian International Air Show, Adelaide Grand Prix etc), all have some level of dependence on a guaranteed level of government support.

This dependence on government funding has necessitated the need for thorough examination and evaluation of the event in order to ascertain the extent to which the assistance is provided. (Rey, 1986) Not only is the pressure of competition to receive public funding increasing, but also the social and cultural benefits of these events is no longer seen as being sufficient justification for public funding. The more successful claims will be 'those that can demonstrate financial soundness and positive benefits to the economy.' (Centre for South Australian Economic Studies, 1988)

This recognition has cemented itself not just in the minds of sporting/exhibition promoters, but also in the minds of those involved with Arts and Cultural events. Traditionally, arts/culture practitioners and sponsors (usually government), have accepted the 'arts and culture is good' argument as significant justification for the support of an event.

"However, with the recent periods of recession and worldwide attempts at levelling or cutting back government expenditure, the arts lobby has been forced to justify its demands in more rigorous terms. One way of doing this is to adopt a 'language' that is universal in 20th century policy making ie., economics." (Brokensha, Tonks, 1986;37)

8.1 The Economic Impact of Major Special Events

Economic benefits are those new economic gains that are directly attributable to the event itself being conducted. The economic impact of major special events is 'the effect expenditure incurred by the organisers, sponsors (Government or private) and spectators of the event has on income and employment.' (Rey, 1986;22)

As mentioned previously, there are two essential elements in the calculation of the economic impact that a major event has on a given region. The first, and most obvious element, is the direct impact of the actual level of spending that occurs as a direct result of the event. This direct spending, will then in turn cause flow on impacts as the effects of this initial expenditure 'work their way through the economy.' These flow on and induced effects can be very substantial depending on the size of the multiplier for the region. 'Similar impacts can be measured with

respect to "household income" and "employment." (Centre for Hospitality and Tourism Research, 1993;11)

Mass patronage of special events is of special importance to the economist for two reasons. 'First, there are the multiplier effects of spending associated with the provision of facilities to consider, whilst secondly there are microeconomic decisions relating to the supply and demand for.... event competition.' (Morley, Wilson, 1985;1)

There have been many attempts using various techniques to measure the economic impact of such events. One of the earlier attempts to conduct an economic impact assessment was by Ritchie and Beliveau in 1974. Hallmark events were analysed in order to measure the boost they could create for seasonal slumps in the tourism industry. They decided to analyse the Quebec Winter Carnival from data collection sources which measured the economic impact of the event.

It was advocated that by using multiple measures as a means for the cross verification of variables, validity of final results could be supported. This was achieved by splitting sources into direct (surveys) and indirect (statistics) groups and then trying to achieve general support and verification of their estimates. (Centre for South Australian Economic

Studies, 1988)

A study was conducted by Davidson and Schaffer in 1980, which evaluated the techniques used during the process of analysing economic impacts of events in America. It was argued that the process of surveying was the most valid source of data collection. This meant that business and consumers could be surveyed to 'provide some form of cross verification.'

The study recognised the importance of differentiating between those patrons who had specially visited the region to attend the event, and those who had visited purely because they were already there, (time switching could therefore not be listed in expenditure estimates). However, they also noted that if local expenditure was made from savings, there would be a reduced amount of holiday spending in other regions, and therefore this expenditure should be counted. (The Centre for South Australian Economic Studies, 1988)

In Australia, Burns and Mules (1986) developed a model for the analysis of impacts from a regional perspective. This model included the measurement of tangible benefits and costs, while also considering the social aspects and long term economic/social effects. The research

established a framework of 'watchpoints' and questions which should be considered in the analysis of special events.

The Centre for South Australian Economic Studies (1988) developed a financial and economic modelling framework for major sporting events. The model was designed to be used as 'an adjunct to current planning processes to both analyse and predict the financial and economic outcomes' of such events. The model was based on the interrogation of a data base which categorised different events before estimating financial and economic forecasts.

As well as economic impacts associated with major special events there are also numerous financial, social and environmental impacts which can be linked to the commencement of such an event; however it should be noted that the impact of major events on social and environmental factors is not within the bounds of this study.

The financial impact of a major special event is in essence, a question of the calculation of perceived or 'real' costs and revenues. 'An event may make a financial loss in this sense and yet may still make a positive contribution to the economy.' (Centre for South Australian Economic Studies, 1988;) As noted earlier, the economic contribution of an event is

measured by it's relevant level of impact on an economy's Gross Domestic Product (GDP) and Balance of Payments.

Even though an event may incur a financial loss from the operators perspective, it may attract significant numbers of patrons (from outside the region of analysis) who inject significant amounts of expenditure into the 'local' economy. Therefore, 'the economic benefits of the event may outweigh the financial loss and the event may justify some support from the public purse.'

The Adelaide Grand Prix provides an example of an event which has made a financial loss, and yet has been perceived to generate sufficient economic benefit for the South Australian economy to disregard the operating loss. (Centre for South Australian Economic Studies, 1988)

A further example of the often diverse relationship between the economic and financial impact of a major special event can be found in the recent Australian International Airshow and Aerospace Expo, Avalon, 1992, where the financial gain of the event was minimal, but the economic impact on the Victorian economy was estimated at over $36 million. (Centre for Hospitality and Tourism Research, 1993)

TABLE 5

EXAMPLES OF ECONOMIC IMPACT OF MAJOR AUSTRALIAN SPECIAL EVENTS

YEAR	NAME OF EVENT	ECONOMIC IMPACT
1982	COMMONWEALTH GAMES	$180M
1985	WORLD CUP ATHLETICS	$18M
* 1986	AMERICA'S CUP DEFENCE	$139M
1989	AUSTRALIAN MOTORCYCLE GP	$44M
1990	WORLD LIONS CONVENTION	$104M
1990	AUSTRALIAN OPEN TENNIS	$58M
1990	ADELAIDE ARTS FESTIVAL	$20M
1991	SYDNEY FESTIVAL OF ARTS	$44M
1991	GOLD COAST INDY GP	$35M
1992	WORLD RALLY CHAMPIONSHIP	$45M
1992	AUST INTERNATIONAL AIRSHOW	$36M
1992	ADELAIDE FORMULA ONE GP	$37M
* 1993	ROTARY INT'L CONFERENCE	$80M

* Pre Event estimate

NOTE: Caution should be applied when interpreting the level of economic impact in the above tables, as different methodology and criteria in their development disallows consistency of data.

(Above listed data has been sourced from reports listed in the references)

However, what most importantly should be stressed when analysing the economic impact of major special events, is the broader nature these impacts can emplace on tourism development for a given area. The attainment of less specific impacts is gradually being recognised by both government and tourism planners. In essence this will mean that the study of impacts of major events will not just concentrate on pure monetary returns, but on a wide and varied range of possible outcomes.

Events may be supported in order to meet specific goals, 'such as spreading tourism more widely or seasonally, or which events to avoid because of the problems they cause; they will want to know which events will yield the best returns on public investments, and sometimes officials will sanction money-loosing events which generate broader economic, political social environmental gains for the area.' (Getz, 1993;7)

Further, it is often argued that because major events enhance the tourist image of an area, there is an "background" economic benefit attributable to events from tourists attracted by this enhanced image. This image enhancing factor may have long term positive effects on tourism as visitors attracted by the event, return to the hosting region after the completion of the event.

Therefore, the trend in event analysis in the future may not necessarily require the type of impact assessment that has been generated by the various economic models in the past. Rather, future analysis may require the careful interrogation of individual events and their ability to 'attract high yield tourists, or hold tourists longer, along with evaluation of their costs and benefits from economic, social and environmental perspective.' (Getz, 1993;7)

9. THE ROLE/METHOD OF FORECASTING PATRONAGE IN THE PLANNING PROCESS

There is an obvious role for forecasting in the planning and development of major special events. As noted earlier, the assessment of an events economic and financial impact has become increasingly important in order for the event to attract necessary funding. It is also of great importance that the event organiser/administrator has accurate forecasts with which to ensure effective planning of the event itself.

Hall (1990) has noted several factors in which patronage forecasting data is crucial. These include; the planning of tourism infrastructure, the minimisation of potentially negative impacts and the marketing of the event to potential investors and/or the host community.

As noted by Getz (1991; 191) there are five questions which must be answered when planning and marketing individual events;

i) What is the existing and potential market demand for special events of this type, in this area, based on past experience?

ii) How many patrons can be expected, and will these patrons be

local, regional, national or international?

iii) What types of people and groups are most likely to be interested in this event, and can be most easily attracted?

iv) What are their needs and motives? What benefits will they get from the event?

v) What are the anticipated spending patterns of visitors and customers? What will people pay for admission?

Similarly, Uysal and Crompton (1985) recognised that tourism forecasting contributes data that helps answer three vital questions in the planning of major special events:

i) How many tourists are likely to arrive at a destination at a given time?

ii) Which origin areas represent the best marketing opportunities for a destination?

iii) Which factors are the most influential in determining future visitation to a destination?

There have been various attempts and methods proposed to measure tourism related demand. One of the earlier researchers in the area, Archer (1976) explained that the fundamental theoretical and practical bases of the principle methods used to forecast tourism demand, had to be reflected in the combination of 'rigorous analysis of past experience with the intuition of expert opinion.' Multi variable regression analysis is suggested as an appropriate tool for forecasting in the short term; up to a period of two years.

Uysal and Crompton (1985) produced an overview of various methods used to forecast tourism demand. Their analysis was based on the surveying of different examples of multi-variable regressions which used various combinations of variables. Some of these variables that were considered included the origin nation's population, the number of 'attractions' or a 'special event'.

Not all of the variables were proposed in the same way, with some in an indexed format, and others set as a ratio. Each of these variables proposed a logarithmic relationship, but warned that predictions would only be as accurate as the predicted variable values; therefore it was useful to provide forecasts as a range rather than a 'specific value'. (Centre for South Australian Economic Studies, 1988) Although there

have been numerous studies into the forecasting of tourism demand for a particular destination, it would appear from a literature review and relevant discussion with industry experts that research into demand forecasting of special events has been extremely limited.

The reason for this being the fact that although common demand forecasting methods can be applied to special events, they are not always totally useful. Destination planners have the need to predict the volume of domestic travel and arrivals to the region and therefore should estimate the proportion of tourists potentially interested in special events of different kinds. However, this exercise alone does nothing for the individual event organiser, as there may be little to no correlation between regional tourist demand and the level of patronage at any given major special event.

Taking this fact into account, there has still been a broad recognition of the need to gain an understanding of the demand relationship with major special events. In 1978 a Feasibility Study was presented for the proposal to stage the 1988 Olympic games in Melbourne. Overall benefits and costs were the same as those that were outlined for the Montreal Games, with the exception of capital investment.

Forecasts of overseas visitors were compiled based on the analysis of Montreal data, using the explanatory variables: population, GDP per capita, cost of travel to the games, size of the games team, and the general attitude toward sport for each country of origin. The cost of travel was found to be the only 'significant' variable, however the study found a strong correlation between GDP per capita, population and the relative size of the team.

Forecasts of visitor numbers used only the first three variables in the prediction of total visitation from each continent. (Centre for South Australian Economic Studies, 1988) As Melbourne was unsuccessful in its bid to stage the 1988 Olympic Games, the validity and accuracy of the results of this analysis, can not be tested.

Major special events are often promoted and launched with a high level of publicity, and a matching level of high or 'inflated' attendance forecasts. There is little discussion as to why many of these events do not reach their forecast patronage levels, and why events like the Brisbane Expo (1988) and South Bank launch exceeded them. What must be stressed is the fact that without 'reliable numbers, organisers cannot estimate total spending, nor can tourism planners calculate the impact; the proportion of repeat visitors cannot be determined, nor can

market segments be estimated, trends cannot be established, and forecasting is hindered.' (Getz, 1991;287)

The need for accurate forecasting of visitor demand is highlighted when one considerers the errors which have been made in the past. For instance, demand forecasting and impact evaluation were contracted by the Western Australian State Government to the Centre for Applied and Business Research at the University of Western Australia, Perth, for the America's Cup Challenge in 1986.

Researchers believed that accurate predictions of visitor numbers could not be based on the experience of previous major special events, given the perceived uniqueness of the proposed event. Therefore, the Centre carried out two surveys within Australia in which respondents were asked by telephone to state the likelihood of their visiting Perth to attend the Cup defence.

Probability factors ranging from .15 (possibly) to 1.0 (certain) were then assigned along with a formula designed to estimate visitor numbers. Local residents in the Perth region were also surveyed in order to determine a scale of expected visitation by both friends and relatives. The prior tourism trends for the state were then analysed to 'arrive at an

estimate of incremental volumes attributable to the event.' (Getz, 1991)

As the level of international patronage was seen as being difficult to estimate, other major special events were analysed. Such analysis found that these events were able to attract around 10 per cent of their visitation from abroad; and thus this proportion was applied to the Cup defence. (Centre for Applied Business Research, 1987)

Although 930,600 patrons were estimated to have visited Perth in the five months of the America's Cup, this estimate was 270,000 (22%) shy of the 1.2 million forecast in 1986. Foreign visitation had been forecast at 146,000 with the post event estimate set at 134,900. Interstate visitors were calculated to be approximately 43% less than the forecast levels. (Centre for Applied Business Research, 1987)

A similar study has been conducted by the National Institute of Economic and Industry Research (NIEIR), in 1992. The study reported on the economic impact of staging the 1998 World Equestrian Games in Melbourne, and therefore had to forecast special event patronage demand.

The methodology for forecasting the relative level of patronage demand was purely based upon comparative analysis:

> "Estimates of international and interstate visitor numbers are made on the basis of the Swedish experience at the 1990 World Equestrian Games, as well as on information from a number of sources including the Equestrian Federation of Australia and other international branches of the Federation."

The problem with this form of comparative analysis is that the variables which contribute to total demand for a major special event are based on factors which have been predetermined in another nation, and therefore may not be totally appropriate for application to the Australian experience. The most obvious of these factors is the geographical position of Sweden to Europe, which will undoubtably increase foreign visitation when compared to a geographically remote nation like Australia.

9.1 Methods of Forecasting Special Event Patronage

Getz (1991) lists six different methods for measuring event patronage. These methods include visitor surveys, turnstile counts, ticket sales, observation, business survey and financial records. However, the problem common to all of these methods is that the measurement is historical by nature, and therefore cannot be analysed in a predictive manner.

Hall (1990) identifies seven qualitative and quantitative approaches which have been applied to forecasting tourism demand, and are also applicable to event demand (see table 6):

TABLE 6

QUALITATIVE	QUANTITATIVE
Analysis of vacation surveys Survey inquiries of potential visitation Delphi technique Judgement-Aided model	Time Series Analysis Gravity and Trip Generation Model Multivariate Data Analysis

One of the most cost effective methods of forecasting patronage demand of an event is via the study of vacation surveys. Through the analysis of these surveys, it is possible to identify trends in visitor numbers to a specific location. These trends can be refined by the surveying of potential visitors in 'tourism generating regions' in an attempt to forecast the number of visitors that may travel to a host community or event. However, this method has been proven to be relatively inaccurate, as demonstrated earlier by it's application to the America's Cup study.

Other different methods of forecasting event demand include the use of the Delphi Technique and Judgement Aided models. The delphi technique is a method in which conclusions are attempted to be drawn from within groups of experts via the application of a series of questionnaires, collating judgements, and the provision of feedback to all of the participants. 'Additions and comments from earlier rounds are taken into consideration so that ultimately the most desirable solution emerges from the collective knowledge of experts.' (Uysal & Crompton 1985;8)

Similarly, 'the Judgement Aided Model assembles a panel of experts in an attempt to reach consensus on different tourism scenarios. Perhaps the most common qualitative approach, this method often takes the form

of committee meetings or seminars.' (Hall, 1990;17)

Apart from these qualitative methods of forecasting special event demand, there are also several quantitative methods which can be employed. Forecasting techniques may be divided into causal and Noncausal methods. Noncausal methods assume that the variable may be forecast without reference to the factors which determine the level of the variable, and often include methods such as time series models in which the past history of the forecast variable is extrapolated. On the other hand, econometric models specifically relate the forecast variable to a set of determining forces. (Witt, Moutinho, 1989)

An example of the application of a Noncausal forecasting method to event demand was provided by Morley and Wilson (1985) in their Time Series Analysis of the demand for Australian Rules football. A Time Series model was developed to estimate attendance relationships for VFL (Now AFL) football.

The demand function was written as being:

$$A = f(P,Y,U,O) \quad (1)$$

A = attendance at home and away matches

P = real income

U = uncertainty of outcome

O = represents other relevant non economic factors

The results of the study indicated that the effect of the real income variable was that the VFL was seen as 'an inferior good in consumers' expenditure.' It was also found that significant increases in real price had little impact upon attendance, although caution was expressed due to the expected collinearity with the real income variable.

Of importance however, was also the fact that the study noted the 'variable of uncertainty of outcome' was crucial to the maximisation of spectator interest, (relevant to sporting events). As Dabscheck (1975;176) notes:

> " Profits will be maximised if there is a high degree of uncertainty about the result of any competition. If the result of a competition is uncertain, interest in its result will be high and so in turn will be attendances; gate receipts and profits."

One of the major advantages of econometric forecasting over methods like Time Series Analysis is that it 'explicitly takes into account the impact on the variable to be forecast of changes in the causal variables,

whereas forecasting by extrapolation presupposes that the factors which were the main cause of growth in the past will continue to be the main cause in the future, so any alteration in the trend is likely to generate poor forecasts. Furthermore, econometric models may be used for active 'what if?' forecasting, that is to assess the consequences of possible changes in the casual factors.' (Witt, Mountinho, 1989;165)

An additional advantage of econometric forecasting is that it provides several statistical measures of the level of accuracy and significance of the forecasting equations. 'Although more sophisticated forecasting methods provide no guarantee of greater forecasting accuracy, econometric forecasting models provide considerable benefits over extrapolative methods.' (Witt, Mountinho, 1989;165)

Further, as mentioned above, time series analysis consists of the collection of statistical data over a period of time, which can then be analysed statistically in relation to the 'direction and magnitude' of future trends and patterns. However, because of the unique and 'one off' nature of a special event, this method is not as effective as required.

The most common method of applying quantitative data analysis to event demand is found in the application of multivariate regression models.

(Hall, 1990) Multivariate regression is a means of identifying the relative influence of different variables upon the demand for a major special event.

These variables may include the relative cost or distance of travel to an event, the cost of entry to an event, the level of promotion an event received or the weather conditions during the time the event is held.

Blackorby, Richard and Slade (1986) undertook an analysis of various world fairs, and applied linear regression analysis to detect the key factors which affected their attendance. They concluded that three factors accounted for 93% of the variation in attendance at the fairs which were examined.

These three factors were;

* average price in US dollars
* size of the site in acres
* the number of foreign pavilions

Using these factors, they predicted an attendance of 18 million paid visits to Vancouver's Expo in 1986. This can be compared to the official forecast of 13.5 million, and the actual count of 22.1 million site visits. (Getz, 1991) The level of accuracy in these forecasted predictions when compared to the actual figure was 81.4%, and 61.9% respectively.

Similarly, the Centre for South Australian Economic Studies (1988) applied economic modelling techniques in order to predict the total visitation of major sporting events. The key predictors were found to be:

i) the exchange rate (adjusted for inflation)

ii) whether or not the event was a world championship

iii) total real expenditure incurred in staging the event (a reflection of the event's size and status)

iv) an index of the popularity of Australia as a tourism destination from each of the six geographical zones that were identified.

The last of these variables (iv) was a reflection of the tourism content of sporting trips to Australia.

It was also noted that because of the high level of variability in the types

of sporting events, there are a number of factors that the patronage model had to take into account. These included:

- both the size of the event in terms of the number of competitors and spectators, and whether they are team or individual events (or a combination of both).

- whether the event is held in a single location, or multiple locations and whether it is a circuit or not. In many cases, seemingly independent events can be tied together.

- the variation between single day events, and multiple day events.

- the location of the event.

- the popularity of the sport.

- the notoriety of the competitors.

- whether international conferences/meetings are timed to coincide with the event.

However, as noted by Uysal and Crompton (1985;11) and Hall (1990;17), despite the sophistication of statistical methods such as multivariate regression analysis, 'forecasts of tourism demand can produce only approximations.' Similarly the unique nature of a major special event, and the lack of complete event statistics often complicates the forecasting process of special events.

It is for this reason that the application of both qualitative (survey industry experts), and quantitative (multivariate data analysis) forecasting methods is advocated in order to gain acceptably accurate results in the forecasting of patronage for major special events.

As noted with much foresight by Hardyck and Petrinovich (1976;4):

> 'Multivariate analysis methods will predominate in the future and will result in drastic changes in the manner in which research workers think about problems and how they design their research. These methods make it possible to ask specific precise questions of considerable complexity in natural settings. This makes it possible to conduct theoretically significant research and evaluate the effects of naturally occurring parametric variations in the context in which they normally occur. In this way, the natural correlations among the manifold influences on behaviour can be preserved and separate effects of these influences can be

studied statistically without causing a typical isolation of either individuals or variables.'

10. MODEL BASED FORECASTING

As previously stated, there are a number of different approaches to forecasting demand variables. A modelling approach has been adopted as the most appropriate methodology in this study, augmented by the application of an assessment of event demand variables by a panel of experts.

The modelling approach involves;

* assuming the variable of patronage (dependent variable) is determined by other variables (independent variables)
* postulating the form of the relationship between the variables
* collecting data on each of the variables
* estimating the parameters of the relationship from the historical data
* using the estimated relationship to forecast the dependant variable (special event demand)

The researcher will select independent variables that are believed to be relevant to the analysis on theoretical grounds. (Poole, 1988)

10.1 Regression

Regression analysis involves the testing of the impact of one or more independent variable on a dependant variable.

The basic formulation of regression analysis is;

$$Y = X_1 + X_2 + ...+ X_n$$

10.2 Multiple Regression

Multiple regression is a method of analysis that is appropriate when a research problem involves a single metric dependant variable presumed to be related to one or more metric independent variables. The objective of multiple regression analysis is to predict the changes in several independent variables. The objective of this method is usually achieved through the statistical rule of least squares. (Hair et al, 1992)

Multiple regression analysis is a statistical technique that seeks to establish the relationship between a single dependant variable, special event patronage, and several independent or predictor variables such as

event marketing and weather patterns. The objective of this method is to use the independent variables whose values are known to predict the single dependant value desired by the researcher.

'The result is a **variate**, a linear combination of the independent variables that best predicts the dependant variable.' These variables are also weighted in this process in which the weights denote the relative contribution to the overall prediction of the analysis. Therefore regression analysis ensures that the researcher is provided with the 'maximal' prediction in a format which at the same time facilitates interpretation as to the influence each factor makes upon the prediction. (Hair, et al, 1992) The basic formulation of multiple regression analysis is;

$$Y = B_0 + B_1 X_1 + ...+ B_n X_n + e$$

Where Y = the dependant variable

B = the independent variable weight

X = the independent variable

$_1$ = the first occurrence

$_n$ = the nth occurrence

e = an error value

10.3 Multiple Discriminant Analysis

Not a dissimilar method to Multiple regression analysis, except that one or more of the independent variables is nonmetric data, (ie nominal or ordinal). Multiple Discriminant Analysis (MDA) is a method of statistical forecasting which has widespread application; in particular the identification of the group to which an object (ie special event) belongs.

As noted by Hair et al (1992), 'some possible applications include predicting the success or failure of a new product, deciding whether a student should be admitted to a graduate school... determining what category of risk a person falls into, and predicting whether a firm will be successful or not.' In each of these instances, the objects fall into groups which can hopefully be predicted or explained by a set of independent variables selected by the analyst.

MDA is a method which is used to estimate the relationship between a single nonmetric (categorical) dependant variable and a set of metric independent variables. In general this will be in the form of:

$$Y_1 = X_1 + X_2 + X_3 + \ldots + X_n$$

(nonmetric) (metric)

When selecting a statistical technique that is appropriate to forecast the likely patronage of a major special event, the need for a method which involves a catergorial dependant variable, and several metric independent variables is required. For example, MDA allows the classification of special event demand into three groupings involving low, medium, and high classifications.

Discriminant analysis involves the derivation of a linear combination of the independent variables that will discriminate best between the 'priori' defined groups. This is achieved by the statistical decision rule of maximising the between group variance relative to the within group variance, a relationship which is expressed as the ratio of between-group to within-group variance.

Therefore the linear combinations for a discriminant analysis are derived from an equation that is in the form of:

$$Z = W_1X_1 + W_2X_2 + W_3X_3 + \ldots + W_nX_n$$

where

Z = Discriminant Score

W = Discriminant Weights

X = Independent Variables

(Hair et al, 1992;90)

MDA multiplies each independent variable by it's corresponding weight and then adds them together, resulting in a single composite discriminate score for each individual in the analysis. Therefore, by averaging the discriminate scores for all of the variables within the particular group one is able to derive the mean.

The application of MDA can be divided into three major stages: i) derivation, ii) validation and iii) interpretation. The first stage of derivation involves determining whether or not a statistically significant function can be derived to separate the groups.

The validation stage involves the development of a classification matrix to evaluate further the predictive accuracy of the discriminant function. Lastly, the interpretation stage involves determining which of the independent variables contribute the most to discriminating between the groups. For example, it is possible to test the statistical relationship

between the size of an event's marketing budget, and the relative level of demand it attracts (ie high, medium or low). (Hair et al, 1992)

10.4 Analysis of Variance

Analysis of variance (ANOVA), is closely related to regression analysis in that its main purpose is to also examine the relationship between the dependant and independent variables (ie event patron demand). However, there is one basic difference between these two techniques: "While both dependant and independent variables are metric (ie interval or ratio) in regression analysis, only the dependant variable is metric in analysis of variance; the independent variable is catergorial (ie nominal or ordinal)."
(Parasuraman, 1991;737)

Therefore the ANOVA method will be especially appropriate in situations where, 'the independent variable is set at certain specific levels ... (called treatments) and metric measurements of the dependant variables are obtained at each of those levels.' Therefore, in the context of the development of a model which can predict patronage demand at major special events, the variable (demand) may be set in a catergorial non metric manner, (ie high risk, low risk), while the dependant variables can

remain metric, (ie marketing budgets).

Similarly, the method of ANOVA can be used to understand the independent relationships between the independent and dependant variables which affect event demand, (ie the relationship between ticket price and patronage in the model). For example, if ticket price was adjusted to reflect prior or different events, ANOVA would allow the testing of the significant differences in the mean patronage sales between the price variables. It also provides a 'one shot global test for detecting significant differences between treatment group means.' (Purasurman, 1991;738)

Therefore, the testing of the null hypothesis that this price level will not effect demand would be represented in ANOVA by:

$$H_0 : \mu_1 = \mu_2 = \cdots = \mu_k$$

10.5 Factor Analysis

Factor analysis, in very basic terms, is a data and variable reduction technique which attempts to partition a given set of variables into groups of 'maximally correlated variables'. It is usually applied when there are a large number of metric scaled data which can be generated into a smaller number of variables; called factors. These factors capture as much information as possible from the original data set and are formed by 'taking advantage of the interrelationships among the original variables.'

(Parasuraman, 1991;757)

Factor analysis will typically begin with the examination of a matrix of pairwise correlations among the original variables (ie demand variables for an event), and will explore different ways of combining these into factors so that each factor will primarily represent a group of the highest correlated variables.

This method may be applied to the analysis of a major special event in the following manner:

Example: The organisers of a major event may wish to develop a scaling system which will measure the attitudes of event patrons toward the factors which most influence their decision to attend an event. For argument sake, the organisers of the event would like to concentrate on the top 15 demand variables which will influence patrons decision to attend an event. The organisers may develop an initial pool of demand variables (ie 100), and collect data on these via rating scales which can be collected from a survey of event patrons.

Factor analysis can be applied to construct the desired 15 variable scale in the following fashion: Attitudes are generally believed to have three basic and distinct dimensions cognitive, affective, and behavioural. Therefore, the event organisers will be able to construct a factor analysis of the pool of 100 variables and extract the three factors from it.

By examining the resulting factor loading matrix, and the key variables making up each factor, researchers are able to indicate whether the three attitude dimensions of event patrons are adequately covered by the initial set of variables. If they are found to be adequately covered, the five variables with the largest loadings on each factor can be selected for the final 15 variable scale.

10.6 Application of Statistical Methods

The application of multivariate statistical methods (ie both multiple regression analysis and multiple discriminant analysis), will allow the researcher to gain a clearer understanding of the relationship between the dependent variable that has been identified (patronage of major special events) and the independent variables that will be identified to have an impact on this.

The multiple regression technique will allow the prediction of statistical relationships between the selected independent variables, such as weather patterns and the dependant patronage variable. This prediction of a statistical relationship will provide some very helpful insights into the relevance of individual variables on overall patronage of major special events.

Once this measure has been established, it is possible, via the application of Multiple Discriminant Analysis, to predict the statistical relationship between the dependant variable (patronage) and the set of independent variables in a catergorial fashion. By this it is meant that the level of patronage can be placed in a non-metric catergorial fashion, (ie, high, medium, low) and statistically tested against the pre defined

independent variables.

10.7 Demand Modelling Case Study

Uysal, Gahan and Martin (1993;5-10) undertook a study which used both survey and multivariate data analysis in order to attempt to identify the theoretical framework of event patron motivation. The study went further to assess the stability and variability of these patron motives across different groups of individuals with respect to the selected event and demographic variables. Their work was based upon the assumption that tourist behaviour was two dimensional:

1. The desire for change in one's daily routine (ie..escaping)

2. The desire to obtain intrinsic personal and interpersonal rewards from tourist behaviour (ie..seeking)

For three years the authors of the study worked with the Corn Festival Organising Committee in North America from 1991. During the 1991 festival the authors developed and tested a survey that specifically dealt with the festivals motivational factors.

The main objective of this research was to empirically test the underlying dimensions of event motivation.

A systematic random sample of visitors that were leaving the event site was selected for the study, of which 174 useable questionnaires were collected. A list of 27 motivational items was developed after the review of alternative studies which related to the study of events and tourism in general. Factor analysis, item-to-total correlations and reliability coefficients were used to eliminate statistically non relevant variables. The final result was a list of 24 motivational variables.

It was then hypothesised that these variables would be able to measure the 'underlying dimensions of motivational behaviour' of those attending an event.

Motivational items were measured on a five point Likert scale:

1 = strongly disagree

2 = disagree

3 = neutral

4 = agree

5 = strongly agree

This scaling system was developed so that respondent could indicate the extent to which respondents agreed or disagreed on the importance of each of the variables as a factor for influencing their patronage at the event.

The analysis element of the study was broken down into three separate stages:

1. The 24 motivational statements were factor analysed to 'delineate the underlying dimensions of motivation', that can be attached to event behaviour. Reliability coefficients were then calculated for each of the factors groupings. When extracting the factors, common factorial criteria were used: all the factors had eigen values greater than one, and together they explained a substantial share of total variance in the motivational items.

2. The delineated motivation factors were then compared across the selected demographic and event variables via the application of analysis of variance (ANOVA) technique. Included as demographic variables were; age, education, marital status and income. Event variables which were analysed included; travel group, community type, days attended, and type of attendee.

3. The final section of the analysis attempted to analyse the 'combined effect of selected independent variables on the delineated factor groupings by using multiple classification analysis (MCA).' This method was employed so that researchers were able to locate any trends or patterns which may exist between the response categories of selected variables, with respect to event motivational factors.

Analysis of the results of the study found that the event patrons were more likely to be married (73%), possess high educational status, and be under fifty years of age. Over half of those attending the event came with family members, and nearly 40% had an income of over A$ 50,000.

Most of the patron motivational items had a mean score in excess of four, which suggests that 'these included motivations are of great importance in attending an event.' The top five motivational factors were found to be:

1. Because I heard about the event and it sounded like fun
2. A change of pace from everyday life
3. Because I enjoy special events
4. For a chance to be with people who are enjoying themselves

5. Because I like a variety of things to see and do

The 24 originally located demand variables were then factor analysed in order to delineate the underlying dimensions of event patron motivation. When factor analysed, these motivations resulted in five major grouping which represented over 63% of the variance:

1. Escape
2. Excitement and Thrills
3. Event Novelty
4. Socialisation
5. Family Togetherness

(see Figure 2 overleaf)

The study concluded by supporting the original hypothesis that the underlying dimensions of event demand and motivation are consistent with the human escape and seeking desires. Similarly the emergence of three dimensions, excitement/thrills, socialisation and family togetherness, further supported the original assumptions.

The study of the variables which affected event patronage demand and

motivation also highlighted event planning considerations which provide invaluable information for the organisers of the event. At the forefront of these implications were the factors which would effect the marketing structure and planning of the event. For example, the study revealed that older event patrons tended to place greater importance upon 'Event Novelty' than their younger counterparts. Therefore, such information could be utilised in the planning process, and for the development of appropriate promotional materials to be targeted toward this market segment.

Similarly, the researchers also found that the Friday night attendees placed a great deal more importance on the act of socialising than did their counterparts on Saturdays. This information could effectively shape the nature of activities to be held throughout the duration of the event. Importantly, the research also found that when a event is attempting to attract first time patrons, it is important to focus on the novelty of the event itself. Therefore, this would suggest that the development of appropriate brochures and materials highlighting the nature and characteristics of events themselves should be a high priority for the event organiser.

FIGURE 2

FACTOR ANALYSIS RESULTS OF EVENT DEMAND

Subscales	Factor Loading	Eigen Value	Variance Explained	Reliability Coefficient
ESCAPE		9.46	39.4	.802
To get away from the demands of life	.7637			
To have a change from my daily routine	.7461			
For a change of pace from everyday life	.6206			
Because I enjoy special events	.5022			
EXCITEMENT/THRILLS		1.81	7.6	.850
Because I was curious	.6901			
To enjoy the food	.6672			
Because I enjoy arts and crafts	.6118			
To experience new and different things	.5906			
To be with people of similar interests	.5604			
Because I enjoy festival crowd	.6236			
Because it is stimulating and exciting	.6171			
To observe the other people attending the festival	.6000			
EVENT NOVELTY		1.34	6.0	.810
Because the corn festival is unique	.7084			
Because I like the variety of things to see and do	.6700			
Because I enjoy special events	.6700			
To see the entertainment	.4750			
SOCIALIZATION		1.27	5.3	.786
Because I have been here before and had a good time	.7102			
So I could be with my friends	.6311			
For a chance to be with people who are enjoying themselves	.6109			
To be with people who enjoy the same things I do	.5134			
FAMILY TOGETHERNESS		1.22	4.7	.718
Because I thought the entire family would enjoy it	.7803			
So the family could do something together	.6878			
Total Variance Explained			63.0	

Source: Uysal, Gahan and Martin (1993)

11. RESEARCH DESIGN AND ANALYSIS

11.1 Causal Research

When designing a methodology that will effectively facilitate the identification of event patronage variables, it is essential that the decision making process calls for assumptions regarding the 'cause-and-effect' relationships that major special events generate. Therefore, the research methodology has been designed so that the evidence that is gathered is geared to address these relationships.

As noted by Kinnear et al (1993; 123-124), " casual research provides planned and structured design that will not only minimise systematic error and maximise reliability, but will also allow reasonably unambiguous conclusions regarding causality.... and is appropriate with the following research objectives:

* to understand which variables are the cause of what is being predicted (the effect)- here the focus is on understanding the reasons why things happen;
* to understand the nature of the functional relationship between the casual factors and the effect to be predicted."

As it is the object of this study to identify unknown variables, rather than test those that are known to exist, the research has been designed to test for causality in a wide and varied manner. Research designs can substantially influence the degree of ambiguity present in the evidence regarding causality.

It is for this reason that the main source of data for causal research is the interrogation of respondents through the application of survey analysis. Survey analysis not only allows the research to determine the degree of association amongst the identified demand variables, but also test the original hypotheses set out at the beginning of the research process.

11.2 Survey Analysis

The formulation of a statistical model which can identify the variables which have the largest impact on special event demand requires consideration and evaluation of a wide range of data from various sources in order to arrive at an effective predictive capacity.

While most of the data required for the model may be found in the administrative documents of the major special events which can be analysed, (ie government funding, marketing budgets, weather patterns

and length of the event etc) survey analysis is necessary in order to qualify variable selection for the model.

11.3 Sample Methodology

"Sampling is the process of selecting a sufficient number of elements from the population so that by studying the sample, and understanding the properties or the characteristics of the sample subjects, we are able to generalise the properties or characteristics to the population elements." The reason for selecting a sample rather than collecting data from the entire population is relatively obvious, when one considers the excessive time and cost involved.

Similarly, the studying of a sample rather than an entire population is often likely to lead to a more reliable result, as it could not be expected that the entire population would have the required knowledge and expertise to satisfy the goals of the research. (Sekaran, 1992; 227)

There are two major types of sampling design: probability and nonprobability sampling. In probability sampling, the elements in the population have a known chance or probability of being selected as sample subjects. In non-probability sampling, the elements do not have

a known or predetermined chance of being selected as subjects of the research.

As the data which is required for this research needs to include elements of industry expertise, a nonprobability sample was chosen as the best sampling methodology.

11.4 Purposive/Judgement Sampling

Judgement sampling involves the choice of subjects for the research who are perceived to be in the best position to provide the information that is required. Therefore, the judgement sample design will be utilised when only a limited category of people have the information which is sought by the research.

> "Although judgement sampling may curtail the generalizability of the findings due to the fact that we are using a sample of experts who are conveniently available to us, it is the only viable sampling method for obtaining the type of information that is required from very specific pockets of people who possess the knowledge and can give the information sought."

(Sakaran, 1992; 236)

Therefore, an 'industry expert' (Survey One), survey was designed and distributed to those individuals in the tourism and special event industry who were believed to have an in - depth understanding of major special events. The people who were chosen to complete the questionnaires ranged from event organisers, researchers, planners and consultants for a range of major special events (ie sporting, artistic, festivals ect). (See Appendix A)

11.5 Development of the Survey Instrument

The design of the survey instrument was facilitated by the initial development of the literature review. The information sought from previously implemented studies related to the impact of special events in general has provided a guide to the line of inquiry undertaken in this study.

This research paper is designed to establish a framework in which the variables which have the largest impact on the patronage of major events can be analysed. In order to establish the appropriate level of expert knowledge required, the first round survey instrument was designed to seek:

i) The main criteria for defining a major special event.

ii) The selection of variables which were believed to have the largest impact on patronage demand for major special events.

iii) Whether or not a patronage prediction model was perceived to be required.

iv) The possible applications of such a understanding of demand relationships.

v) Any problems which were foreseen in the development of the study.

(See Appendix B for first round Survey Instrument)

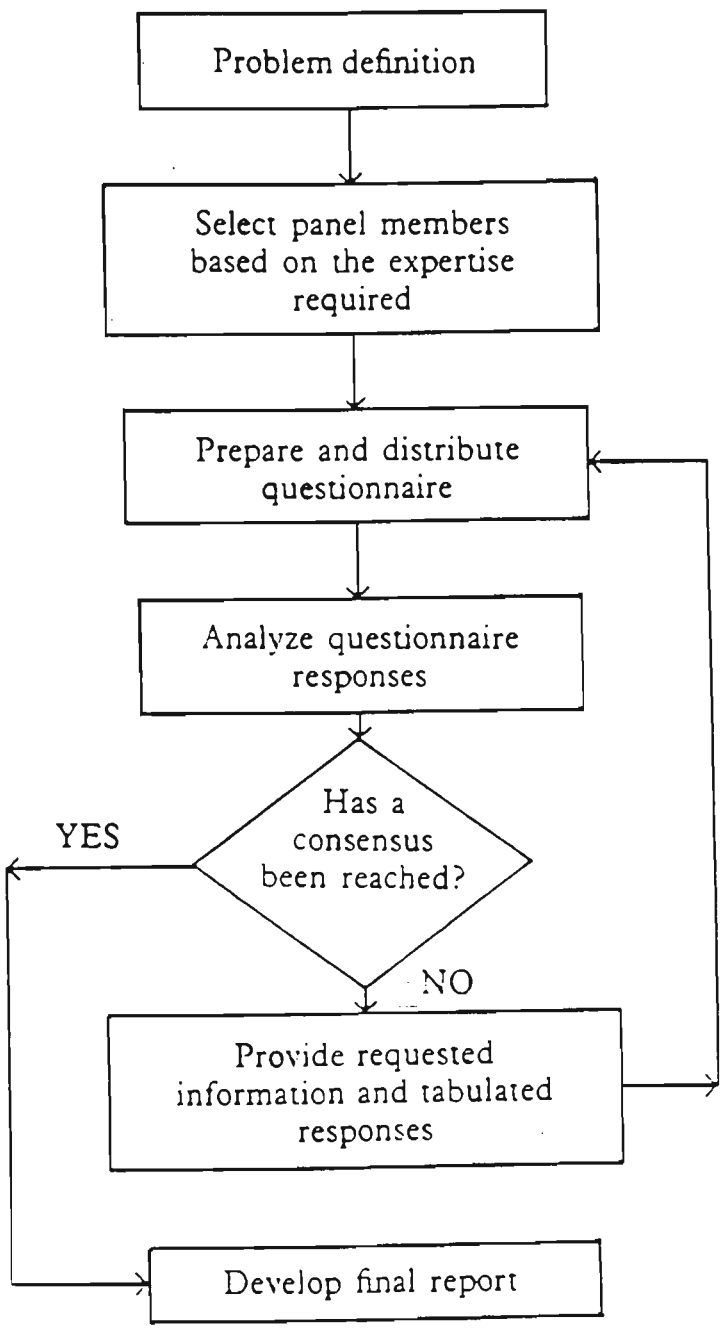
It was decided that the results of the first 'industry expert' survey, would benefit from the application of a second round survey (see Appendix C for second round survey instrument) to refine the selection of answers to question two: "Please list the variables which you believe have the largest impact on patronage for major special events."

The object of refining the results in regard to the selection of variables which have the highest impact on patronage was two - fold. Firstly, it is essential that the results include not only those variables which were selected by those asked to contribute to the study, but also the results of similar studies conducted in the past.

Secondly, by offering the respondents a chance to reexamine their own choices, with knowledge of choices made by others, it is possible to gauge a more objective and informed selection response. A chart examining the research and questionnaire process has been provided in Figure 3.

FIGURE 3

QUESTIONNAIRE\RESEARCH PROCESS



Source: (Witt, 1990;96)

12.1 Limitations of the Survey Analysis

The most important issue in the development of surveys is whether or not the selected survey sample is representative of the market being measured. The sample which was chosen for this study was based on the selection of the judgement sampling process noted above.

As this process involves the selection of industry experts at the discretion of the researcher, the sample that is chosen may be biased by the researchers subsequent selection. Similarly, as the number of those people who have an expert knowledge of the special event industry is unknown, the size of the sample that has been chosen may not truly represent the industry as a whole.

However, as the number of those people both working within, and those having a special knowledge of, the special event industry is extremely limited, it is believed that the selected sample is a true representation of the industry as a whole. Further, it should also be recognised that the basis of this study is regarded as being exploratory in nature, and therefore leaves ample scope for further investigation into the area of study.

11.7 Sample Size

The total sample size for the two rounds of surveys totalled forty seven respondents. The first survey instrument included responses from twenty five industry experts, while the second round survey included twenty two, (three respondents failed to complete the second round of surveys).

It is believed that the above mentioned sample size is representative of a reasonable portion of the population that could be considered to be an industry expert in the special event industry, and therefore is appropriate for the process of judgement sampling.

Sampling Procedure

The procedure utilised to select the study respondents was based on targeting those individuals who were believed to have the most concise knowledge of the special event industry. Respondants were selected either on the basis of their working experience in the event industry, or on their prior academic interests in the field of study. Those who were selected, were first contacted by mail to inform them of the intentions and requirements of the study. Of the initial 33 letters of contact which were issued, 25 responded favourably. These respondents formed the

research sample, and completed the surveys which were implemented during the months May - July, 1993.

12. RESEARCH RESULTS

12.1 Survey One Results

12.2 Criteria for Defining a Major Special Event

Respondents were asked to determine the criteria for defining a major special events. The most frequently listed response (73%) was from those respondents who believed that a major event's definition should be based on the requirement of substantial market demand. Similarly, many respondents (67%) believed that a major special event was one that required a substantial level of infrastructural support in the form of transport, accommodation and venue facilities.

A high level of economic impact on the host community was seen to be the fourth most important (65%) element in defining a major event. Also important in defining a major event was the overall marketing exposure the event was able to generate; represented by respondents stating that a high level of print and visual media (61%), and a large promotional budget to support the event (59%) was required.

The criteria which was most frequently listed by the respondents as being essential criteria for the definition of a major special event were ranked and listed in order of occurrence. See table 7:

TABLE 7

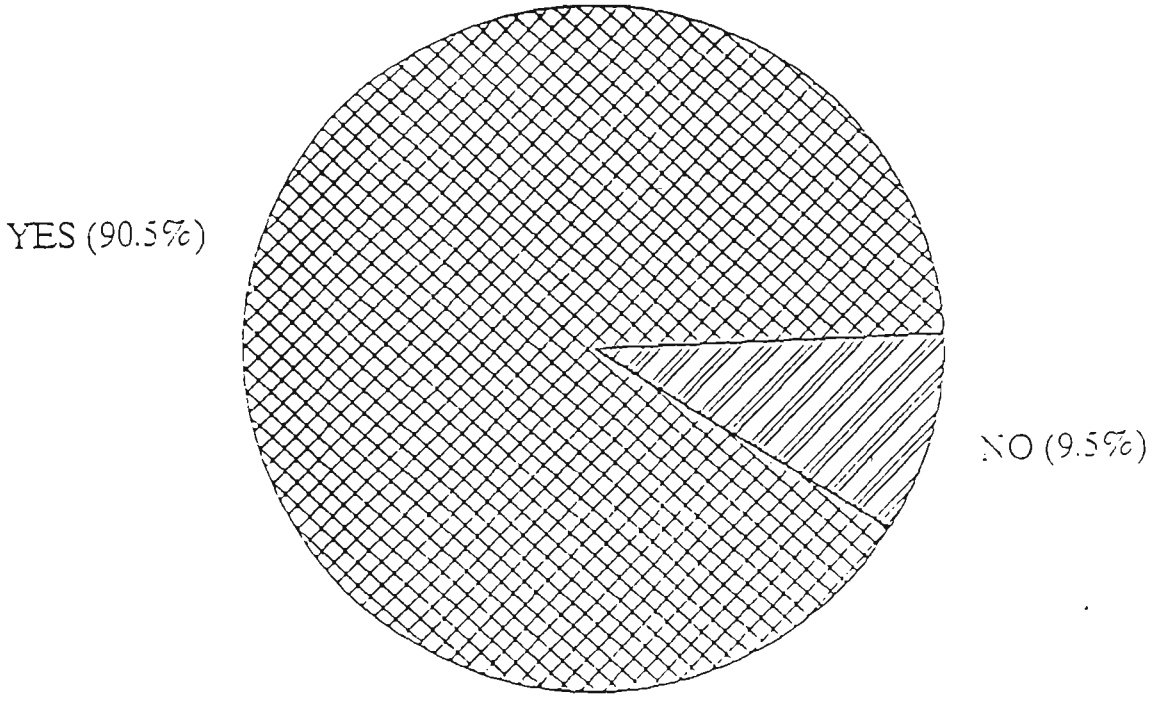
Rank	Freq[y]	ESSENTIAL CRITERIA IN DEFINING A MAJOR SPECIAL EVENT
1	73%	Large potential market demand (substantial patronage)
2	67%	Substantial level of infrastructure (transport etc)
3	65%	High level of economic impact (both from interstate and international patronage)
4	61%	High level of print and visual media exposure
5	59%	Large promotional/marketing effort
6	55%	Ability to evoke community emotional support in the general community (ie pride, nationalism etc)
7	55%	Quality of the event (high standards of event quality)
8	53%	High level of patronage, attendance, audience
9	46%	High level of national/state/regional community support
10	33%	Repeat Opportunity factors (ie repeat visitation)
11	28%	Broad level of society access

12.3 Perceived Need to Develop a Special Event Demand Model

Of those respondents who were asked whether or not they believed that there was a need to develop a model which would help in the prediction of patronage at major events, 90.5% believed that the model was necessary, while only 9.5% believed it was not. This result supported the earlier assumption that the special event industry was void of a clear methodological understanding of the factors that influence patronage at major events.

Figure Two demonstrates the level of perceived need for a model which will help in the prediction of demand for major special events:

FIGURE 4



12.4 Variables with the Largest Impact on Patronage Demand

Respondents were asked to list the variables that they believed to have the largest impact on patronage at major special events. The most significant finding of this analysis was the emphasis that respondents placed on the role of marketing to achieve patronage at special events.

The size of the marketing budget was listed as having the most impact (88%) on event patronage. However, it should also be noted that television exposure and general media exposure were also listed as the seventh most important (52%, respectively) variable which influences event patronage; both of which can be seen as a subset of the marketing function.

The price of entry into the event was seen as the second most important variable (84%), with the perceived quality of the event as the third most important variable (80%). The facilities provided for the event was found to be the fourth most important variable (72%) in the attainment of patronage at major events. This finding may however be misleading, as the relationship between the facilities (accommodation, etc) and the location of the event, which was the fifth ranking response (64%), may create some overlap, and therefore an underestimation of their

significance. Table 8 shows the variables which were located most frequently as having the largest impact on patronage demand, in descending ranking:

TABLE 8

Rank	Freq[y]	VARIABLES WITH LARGEST IMPACT ON PATRONAGE
1	**88%**	MARKETING BUDGET
2	**84%**	PRICE (TICKET Ect)
2	**84%**	TIMING (Of Year, Week)
3	**80%**	PERCEIVED QUALITY OF THE EVENT (ie Big Names, Competitors)
4	**72%**	FACILITIES (Venue, Accommodation ect)
4	**72%**	WEATHER
5	**64%**	LOCATION OF THE EVENT
6	**60%**	LEVEL OF INTERNATIONAL COMPETITION
6	**60%**	MANAGEMENT STRUCTURE (Organising the Event)
7	**52%**	TELEVISION EXPOSURE
7	**52%**	GENERAL MEDIA SUPPORT
7	**52%**	SIZE OF THE EVENT'S HOST POPULATION
8	**44%**	LENGTH OF THE EVENT
9	**32%**	NETWORK INTEREST (Overseas Interest and Support)

12.5 Possible Applications of a Special Event Demand Model

Respondents were asked to state what they believed would be the most appropriate applications of a methodology which would help in the prediction of patronage at major events. In response to this question, 88% of all respondents believed that the most useful application would be for more effective prediction of event revenues.

However, there is a close correlation between this response and the fourth most frequent response; the prediction of the events economic impact (68%). Similarly, it should also be noted that a major element of the acquisition of Government funding, the eighth most frequent response (52%), is both the projection of event revenues and the prediction of economic impact on host communities.

The selection of an appropriate site and facilities was the second most cited response with a frequency of 76%. Alternatively, with a response frequency of 72%, the prediction of an event's supply needs (ie food and beverage) was the third most cited response. The selection of these two factors as the second and third most important potential application of a special event demand model, highlights the need of such a development in the planning stage of major events.

Table 9 shows the respondents most frequent responses to the possible applications of such a model:

TABLE 9

Rank	Freq[y]	POSSIBLE APPLICATIONS OF A SPECIAL EVENT DEMAND MODEL
1	**80%**	As a Revenue Projection Tool
2	**76%**	Selection of Appropriate Site and Facilities
3	**72%**	The prediction of Event Supply Needs (ie Food & Beverage)
4	**68%**	Prediction of the Events Economic Impact
5	**60%**	Gaining Media Coverage and Support
6	**60%**	As a Sales Tool (Sponsors, Suppliers, ect)
7	**52%**	Effective Budgeting - Minimising Expenses, (ie Staffing)
8	**52%**	Help in the Acquisition of Government Funding
9	**48%**	Varied Activities as a Marketing Tool
10	**40%**	Ticketing

12.6 Possible Pitfalls in the Development of the Model

The respondents were asked to provide their opinion on the possible pitfalls they could foresee in the development of a model which could be used to predict demand for a major special events. As the responses to this question were extremely varied, they have been collated and summarised to provide an overview of the response themes. A summary of the main responses is provided in Table 10 below:

TABLE 10

PERCEIVED PITFALLS IN THE MODELS DEVELOPMENT
There may be a need to develop different models to cater for the different type of events, (ie Sporting, Cultural, Festivals, Corporate).
All events generate patronage demand for a variety of reasons. Therefore each event may have to be examined individually.
A strictly academic approach to the viability of a project may be dangerous. A model will not replace the need for experienced people assessing an event on the basis of knowledge.
Would not effectively take into account the effects of event timing.
Very difficult for a model to take account the impact of competing events, and its effect on patronage.
Different events will appeal to different age groups, and income scales.
It is difficult to put a statistical value on the effect the relative level of price (ie tickets etc) will have on the level of demand for the event.

The responses which are seen as having the most validity as being a potential pitfall in the development of a special event demand model include:

1. The need to develop different models to cater for different types of events
2. Event demand is generated for a variety of reasons, and therefore each event may need to be examined individually.

Because of the 'unique' nature of major special events, the development of a model which would help in the prediction of patronage would have to take account of both the nature of the event (ie sport, artistic etc) and also the individual nature of the event itself (ie hosting population etc).

Alternatively, the third listed pitfall in Table 10 voices concern that a model would have to take account of the need to include the opinions of those with experience and knowledge of the special event industry. This pitfall is believed to have been adequately addressed via the application of a series of industry expert surveys which were designed to take account of this pitfall.

The remaining listed pitfalls, include concern over the inclusion of timing,

competing events, patron segments and ticket price in a potential model. It is believed that all of these factors can be adequately addressed in the statistical classification process of developing a special event demand model.

12.7 Survey 2 Results

Respondents to the second round survey were asked to rank each of the variables provided by either placing a score of 1 (High Impact), 2 (Medium Impact) or 3 (Low Impact). In the analysis these variable rankings were then reversed so that a score could be calculated from the responses which would reflect their relative importance to the survey sample.

As twenty one surveys were collected from the selected industry experts, the highest possible score which could be achieved by any one variable was sixty three. These scores have also been converted into percentages, and ranked in descending order. The following tables overleaf provide the collated results of survey 2, (frequency tables have been provided in Appendix E):

TABLE 11

SURVEY 2 RESULTS

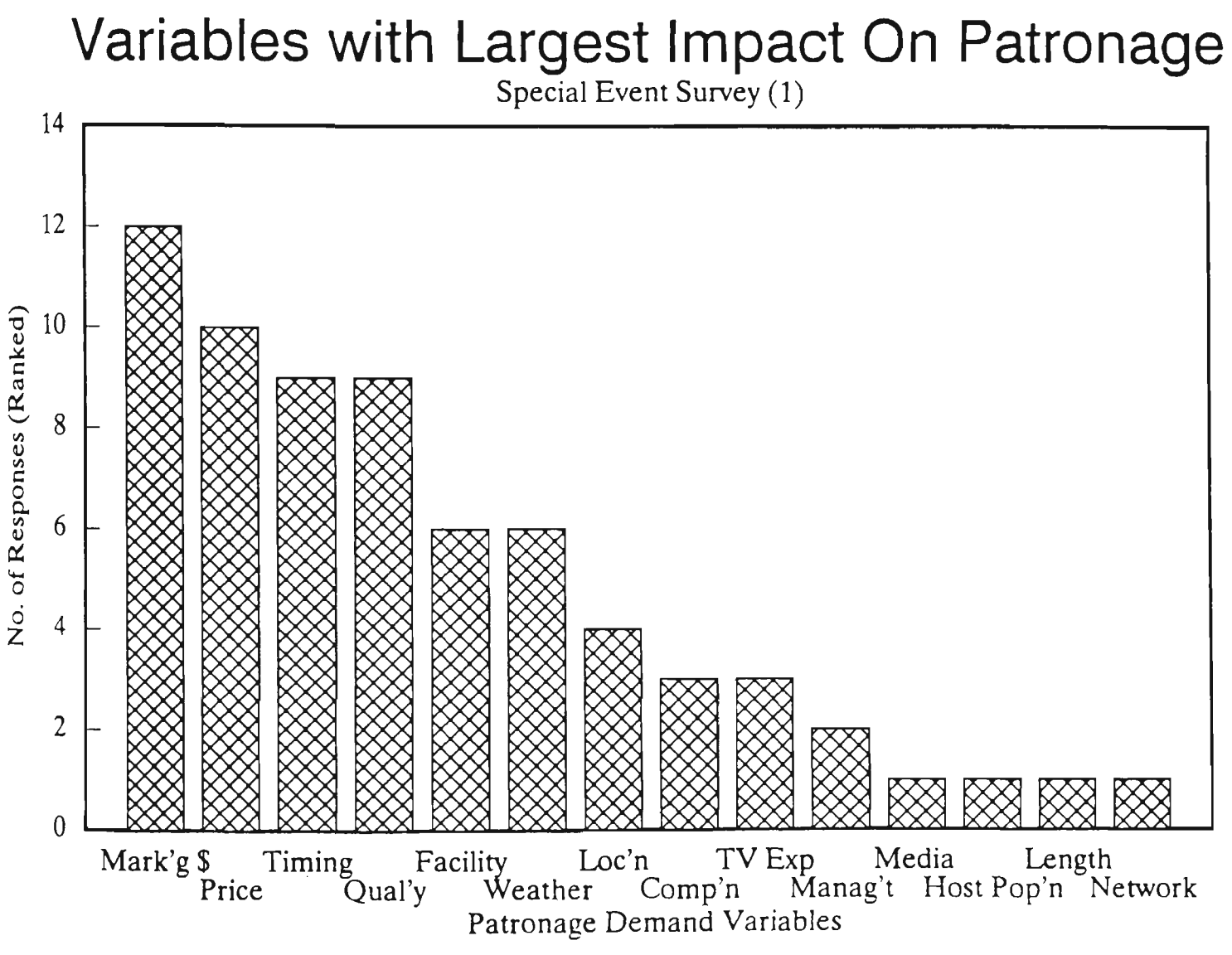
RANK	VARIABLES WITH LARGEST IMPACT ON PATRONAGE	SCORE	%
1	PERCEIVED QUALITY OF THE EVENT (ie Big Names)	60	95.2
2	TIMING (Of Year, Week etc)	57	90.4
3	WEATHER	53	84.1
4	MARKETING BUDGET	51	81.1
5	FACILITIES (Venue, Accommodation etc)	50	79.4
6	HISTORY (Past patronage performance of the event)	49	77.8
7	TELEVISION EXPOSURE	48	76.2
8	PRICE (Ticket, Entry etc)	47	74.6
9	SIZE OF THE EVENT'S HOST POPULATION	47	74.6

SURVEY 2 RESULTS Cont.

RANK	VARIABLES WITH LARGEST IMPACT ON PATRONAGE	SCORE	%
10	MANAGEMENT STRUCTURE (Organising the Event)	46	73.0
11	LOCATION OF THE EVENT	44	69.8
12	GENERAL MEDIA SUPPORT	42	66.7
13	TOTAL 'REAL' EXPENDITURE INCURRED IN STAGING COSTS	38	60.3
14	LENGTH OF THE EVENT	36	57.1
15	LEVEL OF INTERNATIONAL COMPETITION	34	54.0
16	ORGANISATIONAL INTEREST (Overseas Interest and Support)	31	49.2
17	NUMBER OF FOREIGN PAVILIONS	31	49.2
18	SIZE OF THE EVENT SITE (In Acres)	29	46.0

FIGURE 5

Ranking of Identified Variables



12.8 Manageability of located variables

The following table has been provided to demonstrate the manageability of the variables which have been identified in the research thus far, as having the largest impact on patronage demand. The variables have been broken down into three categories:

Manageable: Those variables which can be directly managed or altered at the discretion of the event organiser.

Influence: Those variables which can not be totally controlled, but rather influenced by the actions of the event organiser.

Unmanageable: Those variables which the event organiser has little if any control over.

Of the eighteen variables which were found to have the largest impact on patronage at major special events, eleven were classified as manageable, four as being able to be influenced, and three as variables which could not be managed by the event organiser.

TABLE 12

MANAGEABILITY OF PATRONAGE DEMAND VARIABLES

Rank	Largest Impact Variables	Status
1	Perceived quality of the event	Influence
2	Timing (of year, week)	Manageable
3	Weather	Unmanageable
4	Marketing Budget	Manageable
5	Facilities (Venue, Accommodation etc)	Manageable
6	History (Past patronage)	Unmanageable
7	Television Exposure	Influence
8	Price (ticket, entry)	Manageable
9	Size of host population	Manageable
10	Management Structure	Manageable
11	Location of Event	Manageable
12	General Media Support	Influence
13	Total 'Real' Expenditure incurred	Manageable
14	Length of the event	Manageable
15	Level of international competition	Unmanageable
16	Organisational Interest (O/Seas)	Influence
17	No. of Foreign Pavilions	Manageable
18	Size of event site (in acres)	Manageable

13. THE DETERMINATION OF VARIABLE CAUSALITY

The prior research process of this study has identified the variables which are believed to have the largest impact on patronage at major special events. However, before the above listed variables can be nominated as being clear indicators of event demand, necessary conditions of causality must be met. To facilitate this process individual analysis and discussion of each of the 'top five' dependant variables identified has been provided in order to establish the true relationships of dependency of the identified variables.

13.1 Perceived Quality of the Event

The perceived quality of a major special event by the public in general, was the variable which was seen by respondents as having the largest impact on patronage. This result is not surprising in that the quality of an event is a variable which is not independent of other significant factors in special event demand.

"Many factors may affect the attendance and profitability of major special events, but catering to the customers desires (event quality) is at the heart of developing a successful event-tourism product." (Wicks,

Fesenmaier, 1993;19) Therefore when considering the effect that the perceived quality of an event has on patronage, one must also consider the various factors which contribute to the perceived quality of the event in question.

The perceived quality of an event is the result of a culmination of factors which can be manipulated by the event organiser. These factors include, the amount and quality of marketing promotion the event receives, the perceived quality and popularity of those factors which are brought together as a direct result of the event such as big names and reputable competitors, the state of competition if the event is competitive in nature, the prior reputation that the event, or similar events have established over past years, and the level of television and general media support the event generates.

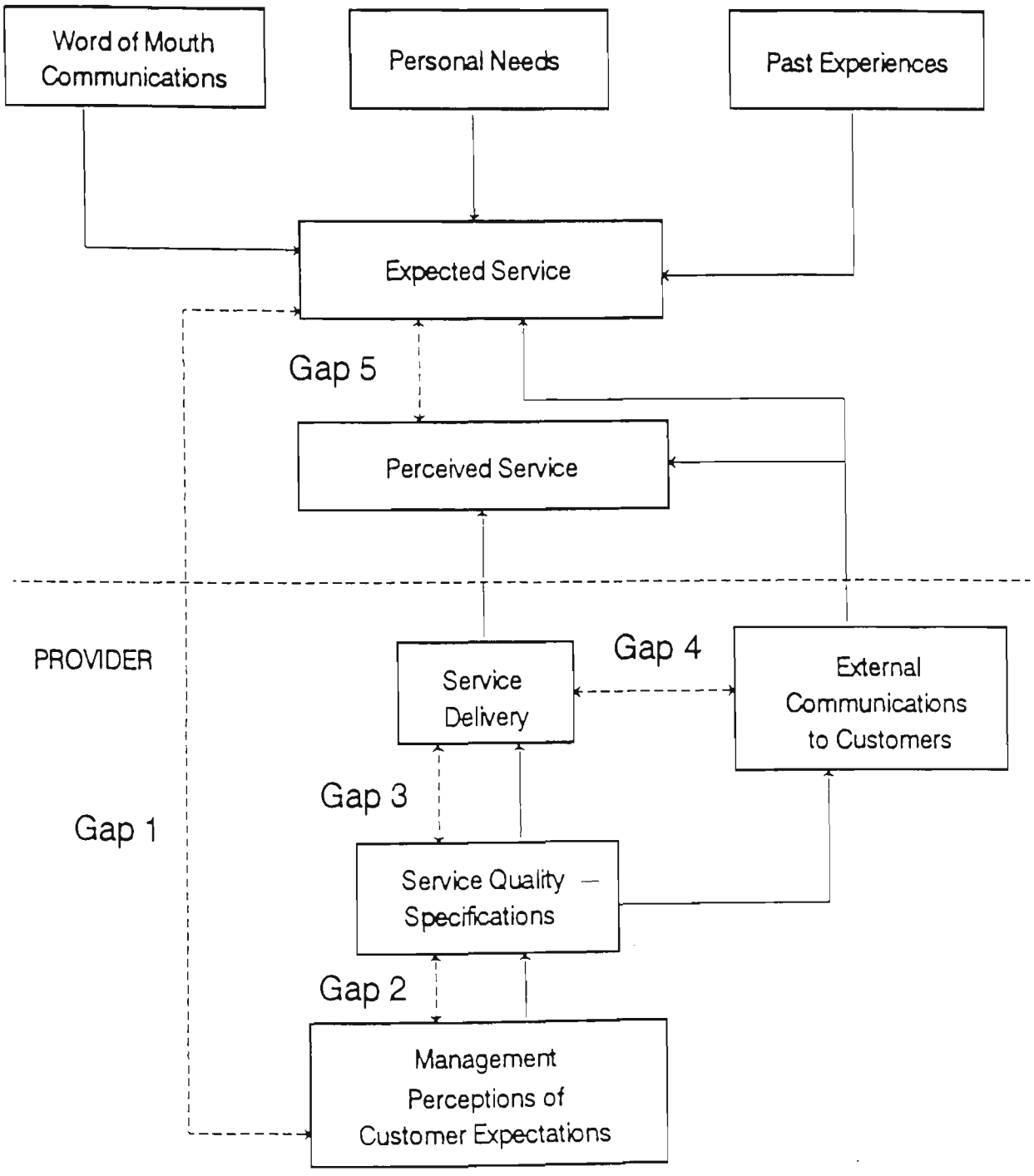
Although the perceived quality of an event is a variable which can be manipulated by the organisers of major special events, it is not a variable that can be totally controlled. It is the role of those organising the event to ensure that every opportunity is taken to maximise the event's potential to be perceived as a quality event by the general public by addressing the above mentioned factors.

It is also of similar importance that the event itself lives up to the patrons expectations with respect to quality. Repeat visitation is most important in building event patronage, and thus if the event itself does not live up to the patrons initial perceptions, repeat visitation for subsequent events will be highly unlikely. Wicks and Fesenmaier (1993;20), provide a model for event quality to explain the process of quality perception. The model describes the sequence of conceptual factors that typically formulate an event patrons perception of event quality.

By understanding the factors that contribute to a patrons decision on the relative quality of a given event, the event organiser will be able to ensure that appropriate actions are taken to ensure maximum perceived quality of the event is obtained. (See Figure 6):

FIGURE 6

CONCEPTUAL MODEL FOR EVENT QUALITY



Source: (Wicks, Fesenmaier, 1993;20)

13.2 Timing

The timing of a major special event was the variable which was identified to have the second largest effect on demand for a given event. The timing of an event is a variable, which for the mostpart is a manageable factor for those organising the event. Timing, like most variables that will influence the level of patronage for an event, includes an assessment of other variables which make up the timing of an event. These factors will typically include the time of day, week and year which is most appropriate for attaining patronage for the particular event in question.

This evaluation will include:

* an assessment of the events accessibility to the general public during different times of the day week and year.

* the most appropriate weather required by the event (an evaluation of both the requirements of patrons and the event itself).

* an assessment of the level of competition the event will receive at different times

* taking into account the needs and requirements of media (ie whether, or not television exposure is appropriate during the times forecast for the event).

* an assessment of the lifestyles and culture of the population that is hosting the event.

The timing of an event is however, not as simple as it may first appear. When setting the timing for a major event, consideration must **not** just be given to the relative times of day, week and year, but also to other 'hidden' factors which will impact on the timing equation. These factors may include an assessment of:

* the general economic climate during the period the event is forecast to be held.

* the underlying mood of the events potential market (ie the current status of both the event, and the location of the event).

A report produced by Airshows Downunder (1993), on the recent Australian International Airshow and Aerospace Expo provides a good example of the consideration event planners should apply to the timing of

a major event in order to maximise potential demand. The report states that:

> "Serious consideration is presently being given to the timing of the next airshow, if it is to be held at Avalon. Either March or late November are being considered in order to avoid vagaries of the Spring weather in Victoria. The proximity of the show to other major events in Australia and the air show calender around the world will also be factored into the eventual determination of when the next show is to be staged.
>
> Both Australian and overseas exhibitors are being surveyed as to their suggestions concerning timing. The early consensus seems to suggest that consideration should be given to staging the next show in March 1995, and thereafter, on a four year cycle."

13.3 Weather

The weather was regarded by respondents to the survey as the third most important variable in determining patronage at major special events. Although weather patterns during the period in which a major event is scheduled, cannot be directly controlled by the event organiser, there are however, certain measures which can be taken to ensure minimal risk to the potential patronage of the event.

Such measures would include:

* an assessment of the type of weather which is required by the event (ie not all major events require the same weather patterns to maximise patronage, as the simple contrasting of festival and sailing events will demonstrate).

* ensuring that past weather patterns for the period (day, week, month and year), the event is to be held are analysed to ensure maximum compatibility with the event.

* ensure that appropriate facilities are provided at the event to reduce the impacts of poor or inappropriate weather. An example

of this is the Ford Australian Open Tennis Tournament which is held at the National Tennis Centre which has a retractable roof that can be used if rain or inappropriate weather occurs. This reduces the impact that poor weather has on patronage at the tennis championship.

13.4 Marketing Budget

The size of an event's marketing budget was found to be the fourth most important variable in predicting the relative level of patronage that an event will attract. Although the size of an event's marketing budget has been noted as a variable which is directly manageable by the organisers of the event, this however will always be constrained by the resources that have been made available for the promotion of a particular event.

Therefore, the selection of the size of an event's marketing budget as the fourth most important factor in the generation of event demand, is probably a reflection of the perceived importance the marketing role has in the patronage success of major special events. Taking this into account, the importance of the marketing variable is not just a pure reflection of the size, in dollar terms, of a given event's marketing budget, but it is also a reflection of the importance of the structure and

effectiveness of marketing programs.

The success of marketing for a major special event will therefore not only depend on whether adequate funds have been allocated to the events marketing promotion, but also whether an adequate marketing process has been put in place to ensure the effectiveness of these funds in the maximisation of event visitation.

Donald Getz (1991) believes that the marketing process for a special event is crucial in the development a of highly patronised event. This planning of an event's marketing process is similar to that of those for goods and services, and therefore consideration should be given to:

1. The Purpose, Goals and Objectives
2. Organisational Development
3. Marketing Plans and Strategies
4. Budgeting and Actions Plans
5. Evaluation and Revision.

The following figure has been provided as a guide to the marketing process which is believed to ensure the maximisation of patronage demand for a major event, (See Figure 7):

Many event organisers have been guilty of holding the narrow view that encompasses the belief that 'events are for everybody' and that 'all those visiting events are alike'. However, as noted by Getz (1993;9), 'numerous event visitor surveys have revealed that event customers, and particularly event tourists, are a highly segmented market... this has major implications for event impact evaluation, demand forecasting or feasibility studies.'

Some events will attract higher spending tourists than others, and as found by the Centre for South Australian Economic Studies (1990), event tourists will often spend more per day than the average tourist. Therefore, when defined in the context of achieving tourism goals for a given area, patron segmentation should therefore take higher priority than the process of mass marketing. Further, event tourists, as noted above, are often a highly segmented market, and therefore the act of mass marketing for events may not be the most appropriate medium for maximising patronage for a given event.

The following example of the lack of commitment to the marketing budget is provided in the 'Economic Impact of the World Cup of Athletics held in Canberra in October 1985', (DSRT, 1986;36):

"The organising committee allocated $270,000 for publicity and promotional purposes. This represented a relatively minor proportion of the overall budget (ie 6%) and was by no means a large amount when compared with the promotional budgets of other international events staged in Australia in recent years... There is, of course, no certainty that the allocation of additional funds to publicity and promotion would have necessarily resulted in substantially greater attendance... however it does reflect a lack of appreciation of the full range of benefits that could be derived from more effective promotional activity... and of course 'potentially' greater patronage."

13.5 Facilities

The facilities that a major special event provides was found to be the fifth most important variable influencing patron demand. The term facilities covers a wide selection of event elements, including; the 'on site' facilities at the venue such as the stadium and parking and supporting infrastructure facilities such as accommodation and road network access. The facilities provided at a major event have been noted as a variable which can be managed by event organisers.

However, it should be recognised that an event organiser's selection and provision of facilities will be limited to both the available physical

(facilities, equipment etc), and budgetary (finances) resources available.

As noted by Getz (1991;222), "for festivals and events, the setting is often an essential ingredient in creating the right atmosphere and in setting parameters of crowd control, accessibility, and essential services." Major special events have specific requirements which will be dictated by the nature of their program and theme. This is especially true of sporting events, artistic performances and major exhibitions.

There are several factors which need to be concentrated upon when analysing the suitability of an event facilities. These factors all contribute to maximising the effectiveness of the event, while at the same time influencing the potential patronage an event can attract. Getz (1991;227) notes that there are six factors which need to be considered in the selection of event facilities in order to maximise event demand.

These factors include:

1. Site Suitability and Capacity

It is essential that the event site not only reflect the needs and requirements of both the physical and natural environment, but also be

suitable for the crowds uses and activities. The selection of an event site's capacity both to accommodate patrons on and off site will have a direct impact on the level of patronage an event can attract.

The greater the capacity of an event to accommodate patrons, will directly affect the level of patronage it will attract. However, it must be also noted that 'just because an event site and facilities can accommodate large numbers, will not reflect alone the numbers it will attract... as a sparsely patronised event will often detract from it's perceived attractiveness.' (Getz, 1990)

2. Crowd Control and Security

A major concern of most event tourists is the safety a destination can offer. Crowd control and security therefore have to be seen as an essential element in the perceived attractiveness of an event, and should be promoted as such to ensure potential demand is met.

3. Accessibility and Traffic Control

The accessibility and traffic control of an event is an important factor in the realisation of potential patron demand. The more traffic and

accessibility problems an event encounters, the less likely potential event patrons will decide to attend the event.

An example of how accessibility and traffic control can effect potential event demand is provided again in Airshows Downunder official report on the Australian International Airshow and Aerospace Expo held at Avalon Airport, in Victoria in 1992:

> "Among the major problems experienced by visitors to Avalon were the long traffic delays for those travelling to the show from Melbourne along the Princess Freeway on the Saturday. Trip times of up to five hours were experienced. Many motorists, out of sheer frustration, turned around and went home. Many others arrived at the show late - tired, frustrated and irate after their ordeal in the traffic. Many, anticipating similar traffic delays on their departure, elected to leave early and suffered the disappointment of missing displays which they particularly wished to see. Countless others, fearing a repetition of Saturday's traffic jam, decided not to attend the show on Sunday as they had planned."

(However, it should be noted that the provision and co-ordination of traffic and transport arrangements for the event was the responsibility of the Victorian Government, and therefore outside the control of event organisers.)

4. On - Site Flow

The on - site flow of a major event will also have a large impact on the perceived attractiveness, and therefore potential demand, of a given event. Therefore consideration must be given to event facilities which will provide patrons with information, safety, accessibility, visibility, convenience and the like.

5. Concentration

The concentration of an event refers to the grouping of events, facilities and attractions in one main location. Visitors to an area usually expect events and attractions to be concentrated in major parks, waterfront areas, downtown districts and civic and cultural centres. Therefore, spreading an event too widely can weaken the markets image of the event as a tourist destination.

Therefore, for purposes of maximising event demand, "clustering festivals and special event settings in combination with other attractions will increase a destination's attractiveness." (Getz, 1991;228) The annaul Moomba festival which is concentrated on the banks of the Yarra River in Melbourne provides a good example of how the concept of clustering is

applied to a major event.

6. Theme

The themed setting of a major event will also have a substantial impact on potential patronage levels. The matching of the facilities an event provides (ie event site and physical attributes), to both the region and culture of the population that the event is aimed to attract will ensure that the events resentment is minimised, while at the same time, event attractiveness, and therefore relative patron demand is maximised. An example of this is the success of the Sydney Gay Mardi Gra's, where both the high concentration of the gay community, and a 'relatively high' acceptance of gay issues, all contribute to the success, and patronage levels of the event.

13.6 Identified Variable Summary

The following is a summary of the list of the variables which were identified in the first and second round of surveys, and variables which have been noted in the relevant literature, as having the largest impact on patronage demand at major special events. The list has been segmented into groupings which describe the level of perceived manageability each factor possesses.

(i) **PRIME IMPACT VARIABLES** :- These are variables which are fixed and manageable.

* **Length** of the event
* **Marketing Budget** - advertising and promotions budget size and timing
* **Television Exposure** - support of major sponsors and media networks, direct telecast or replay exposure
* **Timing** - time of week, month, year - peak holiday periods etc
* **Facilities** - venue capacity, accommodation etc
* **Management Structure** - experience/competence of event organiser/promoter

* **Price** - paid or unpaid entry, value for money perceptions
* **Size of the Host Population** - size of city/region etc hosting the event
* **General Media Support** - print, broadcast etc
* **Total "Real" Expenditure on Staging Costs** - total event budget

(ii) **MINOR IMPACT VARIABLES** :- These are variables which are minor fixed or manageable factors:

* **Perceived Quality of the Event** - big names etc
* **Organisational Interest** - overseas interest and support
* **Entertainment Appeal** - multi-faceted events, popular components
* **Food and Beverage Supply** - availability, access
* **Corporate Support** - sponsorship
* **Ceremonies** - inclusion of official opening and closing ceremonies
* **Number of Foreign Pavilions**

(iii) PRIME INDEPENDENT IMPACT VARIABLES :- major factors over which the organiser has no control whatsoever

* **Weather** - bad weather, rain and wind - good weather, heat, sunshine
* **History** - past patronage performance of the event (similar events)
* **Competitive Events** - events competing for patronage at the same time
* **Established public reputation** of the Event
* **Negative Media Exposure**
* **General Economic Climate** - elasticities of demand

(iv) MINOR INDEPENDENT IMPACT VARIABLES :- factors over which the organiser has no control whatsoever -

* **Pressure Groups** - deny access to event, create bad publicity etc
* **Promotional Spending by Ancillary Services** - travel, tourism, accommodation services and venues
* **Trade Union Strikes** - lockouts, withdrawal of labour etc

* **Patron Participation** - perceptions, national pride, community support
* **Accidents** - in event, crowd, travel etc
* **Bureaucratic Delay** - delay in approvals, funding, marketing etc

Note: The above listing was formulated in collaboration with Mr John , Managing Director, International Events Resources, 1993.

14. SUMMARY FINDINGS

The initial objective of this study was designed in order to qualify the statement that:

> "The identification and of key variables which impact on patronage at major special events, will help the accurate forecasting of patronage predictions."

In the process which has proceeded in order to test the above statement, many helpful insights into major special events have been highlighted. This study has more than anything else, recognised the role major events can play in both the economic and social development of a region's tourism industry if organised and planned in an "appropriate" manner.

However, what also has been recognised is the importance of the need to locate the variables which influence the tourists demand for a major event, so that these benefits can be maximised, and costs minimised.

In order to achieve this goal a process of qualitative research was undertaken. This research process has included an extensive review of relevant literature on tourism and events in general, and a series of industry expert surveys, which both resulted in the findings of this study.

These findings have culminated in the recognition of eighteen variables which are believed to have the largest impact on patronage for major special events.

In relative order of importance, the following factors were found to have the largest impact on patron demand for major special events:

1. PERCEIVED QUALITY OF THE EVENT
2. TIMING
3. WEATHER
4. MARKETING BUDGET
5. FACILITIES
6. HISTORY
7. TELEVISION EXPOSURE
8. PRICE
9. SIZE OF THE EVENTS HOST POPULATION
10. MANAGEMENT STRUCTURE
11. LOCATION OF THE EVENT
12. LOCATION OF THE EVENT
13. TOTAL 'REAL' EXPENDITURE INCURRED IN STAGING COSTS
14. LENGTH OF THE EVENT
15. LEVEL OF INTERNATIONAL COMPETITION
16. ORGANIZATIONAL INTEREST
17. NUMBER OF FOREIGN PAVILIONS
18. SIZE OF THE EVENT SITE

The identified variables were then analysed individually in order to test the validity and manageability of the finding in a practical, but theoretical setting. The resulting conclusions of this process have reinforced the original assumptions of this study, and therefore highlighted the importance these factors have on the viability of major events, and the events success in general.

15. CONCLUSIONS AND RESEARCH RECOMMENDATIONS

The special event industry in Australia, especially over the preceeding decade, has grown in both its internal scope and external importance. Major special events have come to be recognised as an important element in the future tourism development and economic growth of the nation's economy.

However, failing to develop in conjunction with the growth of the special event industry has been a body of knowledge which can be applied to measure the significance and implications of these events. This has been especially evident in the inability of the event industry to measure potential economic, social and environmental impacts created by the hosting of major events.

The level of patronage an event attracts is a key element in the prediction of these potential impacts, and therefore event organisers must have an understanding of the factors which influence patronage levels if they are to ensure appropriate planning action is taken in the future.

This study has provided a framework in which major events potential patronage can be analysed. There have been various statistical

approaches to the analysis of demand variables provided in this study. It is therefore recommended that future research efforts should be undertaken, which include the incorporation of these approaches in order to test the statistical validity of the identified variables.

Further, it is also recommended that the findings of this study be analysed further to provide a practical and exhaustive reference to industry. This reference should take the form of a complete statistical model which could be applied by event organisers to help in the prediction of patronage levels. As noted earlier, this model would help not just in the planning stage of a major event but also hopefully provide many helpful insights into the achievement of a major part of an events success; patronage.

However, it should be noted that this study has highlighted the difficulty in obtaining a event statistical variable sample which would be adequate to formulate a demand model for major-special events. This difficulty in obtaining appropriate statistical data is threefold:

1. There is not a sufficient number of major special events in Australia to achieve an adequate event sample for many statistical methodologies.

2. Those events which could formulate an event sample often do not possess or obtain accurate variable data (ie Marketing Budget Breakdowns, Level of Television Exposure etc).

3. Because of the competitive nature of special events, required information may not be released by event organisers.

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APPENDIX A - DESCRIPTION OF ECONOMIC MODELS

Cost/Benefit Analysis

Cost benefit analysis is a simplified form of analysis used to measure the accruable benefits and costs that are generated from staging an event. These costs would include capital costs in most cases.

An example of this type of analysis would be if the total income accruing to a region exceeds the cost to a region of staging the event, then the cost/benefit ratio is greater than one, and therefore economically the event could be deemed to be successful. Often intangible costs and benefits are also discussed, even if their values are not calculated.

Multiplier Analysis

This approach predominantly focuses on the 'cascading' effect that a dollar of spending has in a community as it is respent over and over to generate employment and income. Based on Keynesian analysis, it estimates the propensity to consume when there is a change in income. The ratio of the change in income is the "marginal propensity to consume".

This ratio will be less than one, as a portion of the change in income may not be spent on consumption because of factors such as taxes and savings.

Multiplier analysis, when applied to a specific economy (national, state, regional), allows the identification of a marginal propensity to consume both goods and services that are locally produced. The dollars that are spent on imported goods and services are a form of leakage, as are taxes and savings of firms and households. As income is being spent and respent, it is reduced after each round by the relevant leakages. The total of these reducing fractions of the original unit is 'an arithmetic multiplier that can be estimated in terms of personal income or local business volume.'

This method is usually applied to events by simply totalling the direct impact and multiplying it by the multiplier that has been generated for the economy that is in question.

(North, 1982)

Economic Base Model

This method divides industries into basic and non-basic sectors of the local economy. The basic sector is made up of export industries which produce goods and services flowing out of the region, or purchased in the region by non-local buyers. Employment and income in this sector are treated as a function of outside demand for the region's exports.

As it is impossible for any region to produce all the goods and services that it requires, leakages are inevitable. The export (basic) sector is important as it attracts new income into the community via export sales, and provides the income the community needs to purchase imports and fund growth. The non-basic sector supplies support services, including trade, medical and legal services.

The theory of the model implies that all economic activity is either basic or non-basic and that local economic growth and stability are essentially determined by demand elsewhere for goods and services from the basic sector. If the basic sector expands there will be an increase in the income available to the community, allowing for the expansion of the non-basic sector.

Once the proportion of an industry that is basic or non-basic has been determined it is possible to develop "economic base multipliers". In the identification of the ratio of basic employment (or income) to non-basic, it is possible to create a base multiplier. As this model emphasises the significance of export (basic) industries, it can be used to study the relationship of events to tourism development, in incurring export sales by visitors to the community. (North, 1982)

Interindustry Analysis

Input-Output Analysis

This approach to economic analysis examines the economy at a "highly disaggregated level". It principally, traces the flow of dollars at both the household and firm level, as well as linkages amongst firms. The relationships among goods, services and labour are looked at in the production of additional units of output.

The dependence of firms on suppliers, etc in the production will lead to a multiplier effect from the original sale. This multiplier will vary from industry to industry and also over different economies. The larger and more diversified the economy, the more likely it is that the needs can be supplied locally, and therefore the multiplier will be higher.

Enterprises linked technologically (by the supply of goods, services and labour) are distinguished from those that are linked through employee households (by wages). As labour is an input to the production process it is possible to use interindustry or input - output analysis not only to estimate effects on total local business volume from a sale in any one industry, but also to 'identify total jobs and salaries in other businesses benefiting from the activity.' Total business volume will therefore be the sum of "indirect" transactions among firms, and the "induced" local business activity that is generated by local employee spending.

Therefore, this is an economic model that attempts to measure the impact of additional expenditures (both current and capital), on the region in

question. The impact of additional expenditures is calculated on value added, income and employment. It can also be calculated or measured in terms of government net revenue. Multiplier ratios are then calculated for each of these. The results of input-output analysis are used as measures of costs and benefits for the cost benefit analysis.

* For potential approaches and applications of these approaches, see Figure 1 and Table 4.

FIGURE 1

APPROACHES TO EVENT IMPACT ASSESSMENT

APPROACHES	GOALS	COMMONLY USED MEASURES
BREAK-EVEN OR PROFIT/LOSS	♦ short term assessment of financial efficiency or solvency	♦ measure direct costs and revenues to organizers ♦ determine surplus or deficit (profit or loss)
RETURN ON INVESTMENT	♦ show the benefits of grants or sponsorship ♦ calculate ROI for private investors or owners	♦ determine the relationship between grants/sponsorships and levels of visitation or economic benefits ♦ use standard ROI accounting practices
ECONOMIC SCALE	♦ determine the economic scale of one or more events, from the destination's perspective	♦ measure total attendance and expenditure of event consumers, plus organizers' expenditures
ECONOMIC IMPACT	♦ determine the macro economic benefits to the destination area	♦ estimate direct and indirect income and employment benefits ♦ often uses multipliers or econometric models
COSTS AND BENEFITS	♦ evaluate the costs and benefits from the perspective of the host community and environment ♦ determine the net worth or value of the event	♦ compare tangible and intangible costs and benefits; short and long-term ♦ assess opportunity costs of investments ♦ examine the distribution of impacts ♦ judge the net worth and acceptability of the event(s)

TABLE 4
APPLICATIONS OF ECONOMIC IMPACT ANALYSIS TO AUSTRALIAN EVENTS

ORGANISATION	METHOD	INPUTS	OUTPUTS
National Institute of Economic and Industry Research	Input-Output Analysis (IMP) Models for National, State and Territory level, based on 1979 data	Visitor Survey - I'State, O'seas patronage Organiser Survey - Event Budgets Consultation with relevant bodies and interests	Direct Economic Impact Indirect & Total Impact * National Impact * State Impact - GSP - Employment - Gov't Revenues - Intangible Impacts (all model generated)
Centre for South Australian Economic Studies	Input-Output Analysis Input-Output tables have been developed for South Australia Northern Territory & borrowed for Victoria (UNE, 1990-91)	Visitor Surveys Organiser Surveys Competitor Surveys ABS data	Direct Economic Impacts Indirect Impact * National Impact * State Impact - household income - employment - Gov't revenue (Impact on GSP multiplied by 7.05% of GSP, converted to 85%) - Social costs and benefits
KPMG Management Consulting	Victorian Input-Output Table 1980-81 (Department of Industry, Commerce and Technology)	Visitor Surveys Organiser Surveys - Budgets - Exhibitors	Direct Economic Impact Indirect State Economic Impact (average sector multiplier) - Intangible Cost/Benefit (survey generated)
Price Waterhouse	Economic Evaluation Cost/Benefit Analysis Addition Revenues + Average State multiplier divided by staging costs = cost/benefit ratio	Visitor Surveys Organiser Surveys - Budgets - participants - exhibitors	Direct Economic Impact Indirect State Impact - household income - employment (survey generated) - Gov't Revenue (Sector estimates multiplied by sector tax rates) - Intangible Impacts

APPLICATIONS OF ECONOMIC IMPACT ANALYSIS TO AUSTRALIAN EVENTS Cont.

ORGANISATION	METHOD	INPUTS	OUTPUTS
Department of Sport Recreation and Tourism	Economic Impact Patron Expenditure Estimates (Patron survey estimates are multiplied by expenditure figures taken from the latest International Visitor Surveys (ATC) are multiplied by BIE income (1.55) and employment ($1m expenditure = 26.6 jobs) multipliers	Visitor Surveys Participant Surveys Organiser Surveys ABS survey data BIE average multipliers	Direct Economic Impact Indirect Economic Impact * National Impact * Regional Impact (average sector multiplier scaled to regional by estimating % of national output the regional sectors represent) - employment
Centre for Applied Business Research	Input-Output Analysis Apply available input - output tables (ie America's Cup Economic Impact Study applied input - output tables derived from 1974/75 national tables)	Visitor Surveys Participant Surveys Organiser Surveys	Direct Economic Impact Indirect State Impact - Household Income - Output effects - Employment

Note: All of the before mentioned techniques of estimating the economic impact of special events require the estimation of patronage numbers.

If the studies are to predict and analyse the impact of the event, then patronage forecasts will be required.

APPENDIX B - RESEARCH ADVISORY LISTING

Those who contributed to the study via their support either in the completion of the two rounds of surveys, or by the provision of valued research advice included:

Ms Sandra Boothe -	School of Hotel Administration - Cornell University
Mr Greg Campbell -	Director - Airshows Downunder
Mr Karl Carthy -	Events Department - Tourism Victoria
Mr Manual Del Rio -	Director - International Events Resources
Mr Fred DiMicco -	The Pennsylvannia State University
Mr Brendan Downey -	Events Department - Tourism Victoria
Mr Brendan Ford -	Marketing Manager - Melbourne Cup Carnival
Mr Donald Getz -	Editor - Festival Management & Event Tourism
Mr Rick Grounds _	Director - The Events Business
Ms Alisabeth Hillary -	Research Officer - Victoria University of Technology
Mr Leo Jago -	Tourism Lecturer - Victoria University of Technology
Ms Lisa Keetch -	Western Australian Tourism Commission
Mr John Kroeger -	Managing Director - International Event Resources
Mr Bob Minnikin -	Director - TPC Management Pty Ltd

Ms Janine Molloy -	Editor - Sports Economics - Centre for South Australian Economic Studies
Mr Jim Reid -	General Manager - Ford Australian Open
Ms Vanessa Reidl -	Hospitality and Tourism Research - Victoria University of Technology
Mr Lorn Sheehan -	Tourism and Hospitality Management - University of Calgary
Ms Dale Sinclair -	Marketing Manager - Adelaide Grand Prix
Ms Sheryl Spivak -	George Washington University
Mr P. Symth -	Calgary Convention & Visitors Bureau
Mr Lindsay Turner -	Economics Lecturer - Victoria University of Technology
Mr Paul Whitelaw -	Executive Director - Centre of Tourism Research Victoria University
Dr Bruce Wicks -	Editor - Festival Management & Event Tourism

APPENDIX C - SURVEY ONE

Special Event Questionnaire

Please list the variables which you believe are essential when defining a major special event.

_____

_____

_____

_____

_____

Please list, 5 variables which you believe have the largest impact on patronage demand for major special events. List the most important first.

	VARIABLES	**RANKING**
i)	_____	_____
ii)	_____	_____
iii)	_____	_____
iv)	_____	_____
v)	_____	_____

Do you believe that there is a need to develop a model which will help to predict the patronage of major special events?

YES ☐ ***NO*** ☐

If you answered yes to the previous question, please provide examples of possible applications for such a model.

_____

_____

_____

_____

_____

What pitfalls do you envisage in the development of such a model?

_____

_____

_____

_____

_____

APPENDIX D - SURVEY TWO

SPECIAL EVENT QUESTIONNAIRE (2)

Could you please list the degree to which you believe these variables have an **impact** on patronage demand at major special events, according to the following criteria:

1 = HIGH **2 = MEDIUM** **3 = LOW**

	VARIABLES WITH LARGEST IMPACT ON PATRONAGE
	HISTORY (Past patronage performance of the Event)
	PRICE (TICKET Ect)
	TIMING (Of Year, Week)
	PERCEIVED QUALITY OF THE EVENT (ie Big Names, Competitors)
	FACILITIES (Venue, Accommodation ect)
	WEATHER
	LOCATION OF THE EVENT
	LEVEL OF INTERNATIONAL COMPETITION
	MANAGEMENT STRUCTURE (Organising the Event)
	TELEVISION EXPOSURE
	GENERAL MEDIA SUPPORT
	SIZE OF THE EVENT'S HOST POPULATION
	LENGTH OF THE EVENT
	MARKETING BUDGET
	SIZE OF THE EVENT SITE (In Acres)
	NUMBER OF FOREIGN PAVILIONS
	TOTAL 'REAL' EXPENDITURE INCURRED IN STAGING COSTS
	ORGANISATIONAL INTEREST (Overseas Interest/ Support)
	OTHER_____
	OTHER_____
	OTHER_____

APPENDIX E - SURVEY TWO FREQUENCIES

SAS 14:0

HISTORY

A_01	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	9	42.9	9	42.9
MEDIUM IMPACT	10	47.6	19	90.5
LOW IMPACT	2	9.5	21	100

PRICE

A_02	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	7	33.3	7	33.3
MEDIUM IMPACT	12	57.1	19	90.5
LOW IMPACT	2	9.5	21	100.0

TIMING

A_03	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	17	81.0	17	81.0
MEDIUM IMPACT	2	9.5	19	90.5
LOW IMPACT	2	9.5	21	100.0

PERCEIVED QUALITY OF EVENT

A_04	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	18	85.7	18	85.7
MEDIUM IMPACT	3	14.3	21	100.0

FACILITIES

A_05	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MEDIUM IMPACT	15	71.4	15	71.4
LOW IMPACT	6	28.6	21	100.0

WEATHER

A_06	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	13	61.9	13	61.9
MEDIUM IMPACT	6	28.6	19	90.5
LOW IMPACT	2	9.5	21	100.0

EVENT LOCATION

A_07	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	2	9.5	2	9.5
MEDIUM IMPACT	19	90.5	21	100.0

LEVEL OF INTERNATIONAL COMPETITION

A_08	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	2	9.5	2	9.5
MEDIUM IMPACT	9	42.9	11	52.4
LOW IMPACT	10	47.6	21	100.0

MANAGEMENT STRUCTURE

A_09	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	6	28.6	6	28.6
MEDIUM IMPACT	13	61.9	19	90.5
LOW IMPACT	2	9.5	21	100.0

TELEVISION EXPOSURE

A_10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	10	47.6	10	47.6
MEDIUM IMPACT	7	33.3	17	81.0
LOW IMPACT	4	19.0	21	100.0

GENERAL MEDIA SUPPORT

A_11	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	6	28.6	6	28.6
MEDIUM IMPACT	9	42.9	15	71.4
LOW IMPACT	6	28.6	21	100.0

SIZE OF EVENTS HOST POPULATION

A_12	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MEDIUM IMPACT	13	61.9	13	61.9
LOW IMPACT	8	38.1	21	100.0

LENGTH OF EVENT

A_13	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	4	19.0	4	19.0
MEDIUM IMPACT	7	33.3	11	52.4
LOW IMPACT	10	47.6	21	100.0

MARKETING BUDGET

A_14	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	9	42.9	9	42.9
MEDIUM IMPACT	12	57.1	21	100.0

SIZE OF EVENT SITE

A_15	Frequency	Percent	Cumulative Frequency	Cumulative Percent
MEDIUM IMPACT	4	19.0	4	19.0
LOW IMPACT	17	81.0	21	100.0

NUMBER OF FOREIGN PAVILIONS

A_16	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	2	9.5	2	9.5
MEDIUM IMPACT	6	28.6	8	38.1
LOW IMPACT	13	61.9	21	100.0

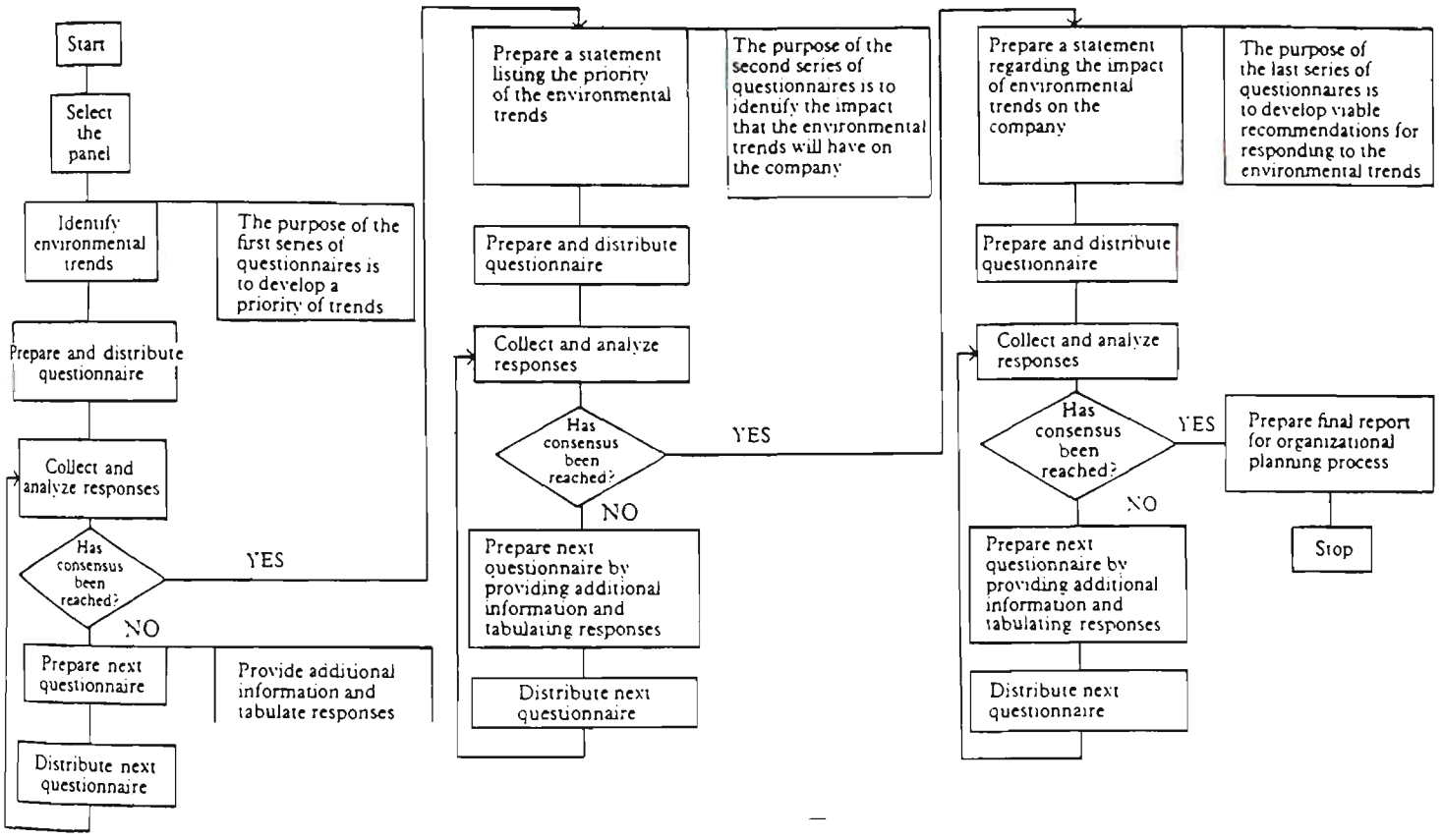
TOTAL EXPENDITURE IN STAGING

A_17	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	4	19.0	4	19.0
MEDIUM IMPACT	9	42.9	13	61.9
LOW IMPACT	8	38.1	21	100.0

ORGANISATIONAL INTEREST

A_18	Frequency	Percent	Cumulative Frequency	Cumulative Percent
HIGH IMPACT	2	9.5	2	9.5
MEDIUM IMPACT	8	38.1	10	47.6
LOW IMPACT	11	52.4	21	100.0

APPENDIX F



Source: (Witt, 1990;97)