The perceived contribution of South African arts festivals to the performing arts: standardisation of the measurement scale

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Abstract

The standardisation of a measurement scale to measure an arts festival’s contribution to the performing arts is described. The measurement scale, namely the questionnaire, is based on literature, where the contributing factors, namely economic, emotional, educational, marketing, quality and growth and development contribution of an arts festival to the performing arts are determined based on the perception of the festival visitor. The scale proved to be a valid measure, as the exploratory factor analysis on the combined data of Innibos and Vryfees (n = 982) supported construct validity and criterion validity. Further validity was proven by a confirmatory factor analysis on the data of KKNK (n = 602). CFA fit indices also indicate that the model has a satisfactory fit with the data. The scale can also be regarded as a reliable measure based on the high Cronbach's alpha coefficients and inter-item correlation values of the factors. Details of the methodology are described and the subsequent use of the scale is advocated.

Keywords: arts festival, confirmatory factor analysis, measurement scale, performing arts, reliability, standardisation, validity

Sources: www.nwu.ac.za portfoliocollection.com
Introduction

Over the centuries, arts festivals have enjoyed plenty of attention in the national and international research field. Since early existence, arts festivals were established to showcase the arts (Hauptfleisch, 2004, 293; Tassiopoulos, 2010, 15; Inkei, 2005, 6; Quinn, 2005; Kruger & Petzer, 2008, 113; Williams & Bowdin, 2007, 306). Kruger and Petzer (2008, 113) define an arts festival as “a community-themed event or celebration designed to display different arts forms and activities, along with the related tourism and hospitality experiences”. With reference to the arts, one can distinguish between the performing arts and the visual arts (Esaak, 2014; Edginton, Hudson, Dieser & Edginton, 2004, 219). Attention is given to the performing arts in this paper. According to Heilbrun and Gray (2001, 4), the performing arts are those arts where the participant is the mode of artistic expression and so can be described as all live productions (including live music-, dance- and theatre performances), sharing a common production technique. The arts festival must then, as it is stated in several studies, keep the performing arts alive; or must contribute to the performing arts they include in their festival programme (Hughes, 2012, 90; Faulkner, Moscardo & Laws, 2001, 157; Finkel, 2009, 12).

Although arts festivals were established to contribute to the arts (Finkel, 2009, 12), it cannot be assumed that they are, in fact, contributing (Quinn, 2005). Therefore, it is an on-going process to ensure that the festival stays focused on its arts programme and will be recognised as an arts festival that contributes to the performing arts. Addressing the problem of arts festivals’ contribution to the arts requires knowledge of the problem, the festivals and the arts that are affected. This can be done through the development of a measurement scale to determine which factors of an arts festival contribute to the performing arts according to the festival visitor (Pretorius, 2012). Taljaard (1984, 8) states that it is a principle of good scientific measurement that the instrument used should produce reliable, valid data – one in which the measurement scale has been fixed so that precisely the same scale can be used at different times and places. There appears to be no agreed-upon, standardised or validated scale for the measurement of arts festivals’ contribution to the performing arts.

Therefore, the aim of this paper is to assess the usefulness and applicability of a current arts contribution measurement scale of arts festivals pertaining to the performing arts (developed by Pretorius, 2012). More specifically, the research objective is to standardise the current arts contribution measurement scale of Pretorius (2012) to the performing arts. By standardising the measurement scale, the usefulness and applicability thereof can be accessed. The objective will be achieved by taking the following route: firstly, a discussion on the background of the study by means of a literature review; secondly, an analysis of the research methodology; thirdly, the results will be outlined; fourthly, several findings will be listed and discussed; and lastly, implications and recommendations will be drawn for arts festival managers and organisers to improve on their current level of contribution to the performing arts.

Literature review

Contributions of an arts festival to the performing arts

Arts festivals play an important part in the arts tourism industry (Goeldner & Ritchie, 2009, 229; Quinn, 2006, 289). According to Visser (2005, 161), the arts festival can be seen as a contributor to the performing arts. These contributing factors, as identified by several national and international researchers, can be potted in different classifications. The first of these is the (1) Educational Contribution, where the arts festival can improve the skills of artists (Page & Connell, 2012, 352; Faulkner et al., 2001, 138); improve knowledge about the arts (Page & Connell, 2012, 352; Finkel, 2009, 4, 14, 18, 19; Korza & Magie, 1989, 3); and promote research within the arts (Quinn,
2005, 931; Prentice & Andersen, 2003, 25). Secondly, the arts festival has an (2) Emotional Contribution, where it inspires people to become artists (Hughes, 2012, 13; Finkel, 2009, 13); encourages people to attend more art productions and/or exhibitions (Finkel, 2009, 13; Axelsen, 2006); and encourages people to join art associations (Waterman, 1998, 55). Thirdly, the arts festival has an (3) Economic Contribution, where it may lead to increases in ticket sales of art products and activities (Finkel, 2009, 12); it may increase investment in the arts; create employment opportunities for artists (Goeldner & Ritchie, 2009, 81; Mitchell & Wall, 1989, 3); stimulate stable income or increase in revenue (Kitshoff, 2004, 238); and may increase art product sales (Jonker, Saayman & De Klerk, 2009, 383). Fourthly, the arts festival may also have a (4) Marketing Contribution, where it promotes the image of the arts (Page & Connell, 2012, 393; Quinn, 2006, 293; Korza & Magie, 1989, 3); creates more awareness for productions and/or art work in the country (Hughes, 2012, 154; Quinn, 2006, 294); markets well-known and new artists (Kitshoff, 2004, 238; Korza & Magie, 1989, 3); and establishes networking opportunities for artists (Bonus & Ronte, 1997, 112). Fifthly, the arts festival has a (5) Quality Contribution, with strict selection requirements for quality products and activities hosted (Finkel, 2009, 4, 16, 17, 20; Korza & Magie, 1989, 12, 36); creating a platform for quality art products; artists create quality experiences at the festival (Liburd & Derkzen, 2009, 137); and where the festival improves quality of the skills of artists (Quinn, 2006, 291, 300). Sixthly, and lastly, the arts festival may also have a (6) Growth and Development Contribution, where it may increase the number and variety of productions and/or art work in the country in general (Hughes, 2012, 153; Van Niekerk & Coetzee, 2011, 350; Faulkner et al., 2001, 138); may lead to the development of other arts festivals (Quinn, 2006, 293; Kitshoff, 2004, 240); an increased production in arts products (Saayman & Rossouw, 2011, 611); stimulating growth in the number of artists (Quinn, 2006, 302; Heilbrun & Gray, 2001, 228); increasing production of the arts through its financial support (Faulkner et al., 2001, 138); and developing infrastructure for the arts (Hughes, 2012, 94, 171; Quinn, 2006, 293; Faulkner et al., 2001, 138; Waterman, 1998, 55) (see Table 1).

Table 1: Contributions of an arts festival to the arts

<table>
<thead>
<tr>
<th>Contribution</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Winner &amp; Hetland, 2008; Anheier &amp; Isar, 2008, 8; Finkel, 2009; Dunjic, 2011; Page &amp; Connell, 2012, 352*</td>
</tr>
<tr>
<td>Emotional Contribution</td>
<td>Waterman, 1989, 55; Heilbrun &amp; Gray, 2001, 228; Reeves, 2002, 29, 30, 37; Axelsen, 2006; Schwarz &amp; Tait, 2007; Finkel, 2009, 13; Quinn, 2006*</td>
</tr>
<tr>
<td></td>
<td>Anheier &amp; Isar, 2008, 3; Allen et al., 2012, 61; Snowball, 2010; Jonker et al., 2009, 383; Finkel, 2009, 12; Goeldner &amp; Ritchie, 2009, 81*</td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation

Perceptual differences
As the scale measures the perceived contribution of the arts festivals to the arts, attention is also given to the perceptual difference from the festival visitor. The festival visitor may have differing perceptions regarding the arts festival's contribution to the arts. There are many definitions pertaining to perception. Krugman (1965, 351) defines the term perception as “the immediate memory one has when thinking of something”. Perceptions can differ according to socio-demographic variables, such as age (Schiffer, 2002; Cohn, Macfarlane, Yanez & Imai, 1995, 220; Dimaggio & Useem, 1978, 184), geographical location (Jurowski & Gursoy, 2004, 299; Mansfeld, 1992; Sheldon & Var, 1984) and economic profile of the festival visitor (Schimp, 2010, 122; Keaney, 2008, 105; Schiffman & Kanuk, 2009, 48; Besculides, Lee & McCormick, 2002, 308). According to Dimaggio and Useem (1978, 187), Heilbrun and Gray (2001, 399) and Hughes (2012, 62), differences in perception can be associated with the level of exposure the festival visitor had or has to the arts in their childhood or currently. Heilbrun and Gray (2001, 74, 182, 399), Swami, Stieger, Pietsching and Voracek (2010, 855), Keaney (2008, 108), and Winston and Cupchik (1992, 8) indicate that perceptions can also be influenced by the festival visitor’s preference or taste for a certain type of art. All of these may have an influence on how the festival visitor perceives the festival’s contribution to the arts.

The measurement scale

A measurement scale is defined as a systematic and standardised method through which information is collected (Van der Walt, 2008, 119). By standardising the scale, the same test can be utilised at different times and places (Cronbach, 1970, 27; Stodola & Stordahl, 1967, 167). However, detailed steps need to be followed to assure that the contribution of arts festivals to the performing arts is reflected and accurately measured through the measurement scale (Fogarty, 1999, 120). Therefore, the scale must be a valid and reliable measure, consisting of quality-assured criteria (Pietersen & Maree, 2010, 215).

Scale validity

Maree and Pietersen (2010, 147) define validity of the measurement scale as the extent to which it measures what it is supposed to measure. There are a number of different types of validity (Pietersen & Maree, 2010, 217). The first of these is (1) face validity, which refers to the extent to which an instrument ‘looks’ valid; (2) content validity refers to the extent to which the instrument covers the complete content of the particular construct that it is out to measure; (3) construct validity refers to how well the construct(s) covered by the instrument is/are measured by different groups of related items; and (4) criterion validity refers to whether an instrument measures what it is supposed to measure. Mayan (2001) adds to the types of validity and states that for the results of an experiment to be trustworthy, the experiment should have a high degree of both internal and external validity. (5) Internal validity is the accurate presentation of a particular context. In other words, the number of items that are formulated to measure a certain concept should have a high degree of similarity among them, since they are supposed to measure one common construct (Durrheim & Wassenaar, 2002; Maree & Pietersen, 2010, 151). (6) External validity, on the other hand, refers to the degree to which results can be generalised – where the reader is able to take the findings and transfer them to other contexts – to the entire population (McMillan & Schumacher, 2001; Durrheim & Wassenaar, 2002; Maree & Pietersen, 2010, 151). Validity of the instrument can be examined through a factor analysis (Pietersen & Maree, 2010, 218; Cramer, 2004, 13). There are different types of factor analyses. Whereas exploratory factor analysis is used to determine what the most likely factor structure for the relationships between a set of variables is, confirmatory factor analysis is used to test the probability that a particular factor structure is supported or confirmed by the data (Cramer, 2004, 28).
Scale reliability

According to Pietersen and Maree (2010, 215), the reliability of a scale means that if the same instrument is used at different times or administered to different subjects from the same population, the findings should be the same. Therefore, reliability is the extent to which a measuring instrument is repeatable and consistent (Maree & Pietersen, 2010, 147). There are a number of different types of reliability, as outlined by Pietersen and Maree (2010, 215), and these are: (1) test-retest reliability, where the instrument is administered to the same subjects on two (or more) occasions – the first set of scores is then compared with the second set by calculating a correlation coefficient; (2) equivalent form reliability, where the instrument is administered and then, on a second occasion, using an equivalent instrument – measuring the same construct – to the same subject; (3) split-half reliability is where the items that make up the instrument are divided in two, forming two separate instruments – the scores on the two separate ‘half instruments’ are then compared by means of a correlation coefficient; and (4) internal reliability, which means that there should be a high degree of similarity among items measuring a certain construct. After the factor structure has been confirmed, the internal reliability of each factor can be determined (Pietersen & Maree, 2010, 221).

Methodology

Development of the measurement scale

The 22-item arts contribution inventory derived from literature was used and dealt with six kinds of arts contribution factors of an arts festival to the performing arts. Expert advice was also collected from professionals in the field of events tourism to ensure that relevant questions were asked in the scale. A five-point response matrix was employed; 1 = I do not agree at all, and 5 = I totally agree.

Data collection procedure

This was a quantitative research study, using the secondary data from a study done by Pretorius (2012), where the data was collected by administering a structured scale at three selected arts festivals, namely the Klein Karoo National Arts Festival (KKNK), the Innibos National Arts Festival (Innibos) and the Vryfees Arts Festival (Vryfees). A random stratified sampling method was conducted for these surveys. The measurement was evenly distributed throughout the duration of the festivals (KKNK = 31 March to 7 April 2012; Innibos = 27 June to 1 July 2012; and Vryfees = 10 July to 14 July 2012) and among strata according to the paid shows, paid entrance festival grounds and at the free shows in and around the festival area.

The dataset has a total of 1 584 completed questionnaires (KKNK = 602; Innibos = 407; and Vryfees = 575). These arts festivals were chosen to accommodate differing geographical locations (KKNK = Oudtshoorn, Western Cape; Innibos = Mbombela, Mpumalanga; and Vryfees = Bloemfontein, Free State), varying lengths of existence ages (KKNK = 21 years; Innibos = 11 years; and Vryfees = 13 years) and differing sizes of festivals (Pretorius, 2012, 183). The sample sizes at the respective arts festivals were adequate to produce valid results for possible improvements for arts festivals on how they can contribute to the performing arts (Pretorius, 2012), and to conduct the standardisation process of the measurement scale.

RESULTS

Results on the validity of the measurement scale

The validity of the measurement scale was determined through an exploratory principal axis factor analysis (EFA) with Oblimin rotation, which was conducted on the collected combined data of Innibos and Vryfees (n = 982). Five factors were extracted by Kaiser’s criterion (see Table 2). All items loaded on a factor with loadings greater than 0.2, indicating that the items are strong indicators of each
factor respectively and that each factor was well defined – confirming that items were understood by the respondents. Items were placed under factors where interpretation was best based on literature and were labelled according to similar characteristics from the loaded 22 items from the scale. The following factors are identifiable from the pattern matrix (Table 2): Factor 1 (Quality and Education Contribution); Factor 2 (Growth and Development Contribution); Factor 3 (Emotional Contribution); Factor 4 (Economic Contribution); and Factor 5 (Marketing Contribution).

### Table 2: Factor pattern matrix

<table>
<thead>
<tr>
<th>Items</th>
<th>Quality and Education Contribution</th>
<th>Growth and Development Contribution</th>
<th>Emotional Contribution</th>
<th>Economic Contribution</th>
<th>Marketing Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>a The festival inspires people to become actors, dancers and singers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b The festival encourages people to attend more theatre-, music- and dance productions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c The festival influences people to join art associations (e.g. dance and theatre groups)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d The festival contributes to an increase in ticket sales of dance-, theatre- and music productions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e Contributes to more employment opportunities for individuals within the performing arts industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f Contributes to a more stable income for individuals within the theatre-, dance- and music industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g The festival contributes to an increase in CD and DVD sales of theatre pieces, dance and music</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i The performing artists at the festival create a quality experience of performing arts during the festival</td>
<td></td>
<td></td>
<td>0.292</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j The festival improves the quality of actors, singers and dancers</td>
<td></td>
<td></td>
<td>0.478</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k The festival contributes to the development of actors, dancers and singers' skills</td>
<td></td>
<td></td>
<td>0.471</td>
<td></td>
<td></td>
</tr>
<tr>
<td>l The festival improves people’s knowledge about the performing arts</td>
<td></td>
<td></td>
<td>0.800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>m The festival promotes research within the performing arts</td>
<td></td>
<td></td>
<td>0.639</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n The festival promotes the image of performing arts (theatre, dance and singing) in South Africa</td>
<td></td>
<td></td>
<td></td>
<td>0.269</td>
<td></td>
</tr>
<tr>
<td>o The marketing of the festival makes people more aware of the productions in the country in general</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.649</td>
</tr>
<tr>
<td>p The festival markets well-known as well as new artists within the performing arts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.720</td>
</tr>
<tr>
<td>q The festival establishes networking opportunities for performing artists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.536</td>
</tr>
</tbody>
</table>
Due to the festival, the number and variety of productions in South Africa have increased. The festival's existence has led to the development of other arts festivals in South Africa. The festival contributes to an increase in the production of music CDs and DVDs. Due to festival, there is a growing number of actors/dancers/singers that have entered the market. The festival's financial support contributes to an increase in productions. The festival develops infrastructure for theatre-, dance- and music productions.

Factor 1 (Cronbach's alpha = 0.867; and inter-item correlation = 0.568) consists of item parcels i to m, where item l obtained the highest mean value of 0.800. The combined factor between the Quality Contribution and the Education Contribution was expected, as it is evident from studies that as the festival visitors and artists' skills and knowledge improves (i.e. education) regarding the performing arts, so will the quality of performing arts products also improve (Kent, 2004). Factor 2 (Cronbach's alpha = 0.896; and inter-item correlation = 0.594) consists of item parcels r to w, where item u obtained the highest mean value of 0.766. Factor 3 (Cronbach's alpha = 0.706; and inter-item correlation = 0.440) consists of item parcels a to c, where item c obtained the highest mean value of 0.766. Factor 4 (Cronbach's alpha = 0.824; and inter-item correlation = 0.540) consists of item parcels d to g, where item e obtained the highest mean value of 0.698. Factor 5 (Cronbach's alpha = 0.866; and inter-item correlation = 0.617) consists of item parcels n to q, where item p obtained the highest mean value of 0.720.

Item h, the festival’s selection requirements contribute to quality music-, dance- and theatre productions, was removed from the original factor pattern matrix, leading to only 22 loaded items. The reason for this is that the item was difficult to explain as item h loaded on other factors and not where it was supposed to according to the literature, making interpretation difficult.

Correlation values vary between 0.3 and 0.5, indicating a visible to practically meaningful relationship between factors (Steyn, 2005) (see Table 3).

Table 3: Correlation between factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality and Education Contribution</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth and Development Contribution</td>
<td>0.476</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Contribution</td>
<td>0.471</td>
<td>0.528</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic Contribution</td>
<td>0.624</td>
<td>0.655</td>
<td>0.536</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Marketing Contribution</td>
<td>0.599</td>
<td>0.475</td>
<td>0.301</td>
<td>0.639</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation
A visible relationship can be seen between Factor 3 and Factor 5 (mean = 0.301). A practically meaningful relationship is evident between the rest of the factors: Factor 1 and Factor 2 (mean = 0.476); Factor 1 and Factor 3 (mean = 0.471); Factor 2 and Factor 5 (mean = 0.475); Factor 1 and Factor 4 (mean = 0.624); Factor 1 and Factor 5 (mean = 0.599); Factor 2 and Factor 3 (mean = 0.528); Factor 2 and Factor 4 (mean = 0.655); Factor 3 and Factor 4 (mean = 0.536); and Factor 4 and Factor 5 (mean = 0.639). The relationships between the factors provide support for the construct validity of the scale (Pietersen & Maree, 2010, 217; Leedy & Ormrod, 2005, 92).

The validity of the scale was further determined by means of analysing the data of KKNK (n = 602) using a CFA to test the probability that the factor structures of Innibos and Vryfees are supported by the data (Cramer, 2004, 28). This supports test-retest reliability of the scale (Pietersen & Maree, 2010, 215; Leedy & Ormrod, 2005, 93). Correlations between the factors were identified through a path diagram (see Figure 1) (Loehlin, 1998, 22).

**Figure 1: Confirmatory factor analysis path diagram**

* QEC: Quality and education contribution;
  h: Selection requirements contribute to quality music-, dance- and theatre productions
  i: Performing artists at festival create a quality experience during the festival
  j: The festival improves the quality of actors, singers and dancers
  k: The festival contributes to the development of actors, dancers and singers’ skills
  l: The festival improves people’s knowledge about the performing arts
  m: The festival promotes research within the performing arts

* GDC: Growth and development contribution
r: Due to the festival, the number and variety of productions in SA have increased
s: The festival’s existence has led to the development of other arts festivals in SA
t: Contributes to an increase in the production of production/ music CDs and DVDs
u: Due to festival, a growing number of performing artists that have entered the market
v: The festival’s financial support contributes to an increase in productions
w: The festival develops infrastructure for theatre-, dance- and music productions

**EMC: Emotional contribution**

a: The festival inspires people to become actors, dancers and singers
b: Encourages people to attend more theatre-, music- and dance productions
c: Influences people to join art associations (e.g. dance and theatre groups)

**ECC: Economic contribution**

d: Contributes to an increase in ticket sales of dance-, theatre- and music productions
e: More employment opportunities for individuals within the performing arts industries
f: Contributes to a more stable income for individuals within performing arts industries
g: Contributes to an increase in CD/ DVD sales of theatre pieces, dance and music

**MC: Marketing contribution**

n: Promotes the image of performing arts (theatre, dance and singing) in SA
o: Marketing of festival makes people more aware of productions in country in general
p: The festival markets well-known as well as new artists within the performing arts
q: The festival establishes networking opportunities for performing artists

The model graphically displays confirmation that five items, namely items h, i, j, k, l and m, were indicators of the Quality and Education Contribution (QEC); that six items, namely items r, s, t, u, v and w, were indicators of the Growth and Development Contribution (GDC); that three items, namely items a, b and c, were indicators of the Emotional Contribution (EMC); that four items, namely items d, e, f and g, were indicators of the Economic Contribution (ECC); and that four items, namely items n, o, p and q, were indicators of the Marketing Contribution (MC). The model confirms that the scale is consistent with the scoring of the EFA. It also confirms that the scale measures what it is supposed to. It therefore supports both criterion validity and construct validity (Pietersen & Maree, 2010, 217; Leedy & Ormrod, 2005, 92).

The standardised estimated factor loadings of the model can be seen in Table 4. Each of the factors had high and statistically significant loadings on their respective parcels as all values were above 0.6 indicating that the item has a reasonable loading on the factor. The parcels are then good pointers of the constructs (De Bruin, 2004, 23). The loadings ranged from 0.614 (item c on the Emotional Contribution Factor) to 0.817 (item w on the Growth and Development Contribution Factor).

<table>
<thead>
<tr>
<th>ITEM</th>
<th>FACTOR</th>
<th>ESTIMATE</th>
<th>C.R.</th>
<th>P-VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Inspires people to become artists</td>
<td>Emotional Contribution (Factor 3)</td>
<td>0.668</td>
<td>0.708</td>
</tr>
<tr>
<td>b</td>
<td>To attend more performing arts</td>
<td>Economic Contribution (Factor 4)</td>
<td>0.776</td>
<td>0.708</td>
</tr>
<tr>
<td>c</td>
<td>To join art associations</td>
<td>0.614</td>
<td>12.482</td>
<td>***</td>
</tr>
<tr>
<td>d</td>
<td>Increase in ticket sales</td>
<td>0.712</td>
<td>15.828</td>
<td>***</td>
</tr>
<tr>
<td>e</td>
<td>Employment opportunities</td>
<td>0.708</td>
<td>15.828</td>
<td>***</td>
</tr>
<tr>
<td>f</td>
<td>More stable income for artists</td>
<td>0.653</td>
<td>14.677</td>
<td>***</td>
</tr>
<tr>
<td>g</td>
<td>Increase in CD and DVD sales</td>
<td>0.708</td>
<td>15.828</td>
<td>***</td>
</tr>
</tbody>
</table>
Table 5 confirms that there were very strong and positive relationships between the five extracted factors. The following correlations are identifiable and confirmed from the CFA: a positive correlation of 0.852 between Factor 1 and Factor 5; between Factor 2 and Factor 1 (0.824); between Factor 2 and Factor 3 (0.796); between Factor 2 and Factor 4 (0.776); between Factor 2 and Factor 5 (0.889); between Factor 3 and Factor 1 (0.784); between Factor 3 and Factor 4 (0.794); between Factor 3 Factor 5 (0.712); between Factor 4 and Factor 1 (0.834); and between Factor 4 and Factor 5 (0.815).

Table 6: CFA goodness-of-fit indices

<table>
<thead>
<tr>
<th>GOODNESS-OF-FIT INDEXES</th>
<th>Recommended values</th>
<th>Rendered values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 $X^2$</td>
<td>$p &gt; 0.05$</td>
<td>852.425; $p &lt; 0.001$</td>
</tr>
<tr>
<td>2 $X^2 / df$</td>
<td>5 or less</td>
<td>4.284</td>
</tr>
<tr>
<td>3 CFI</td>
<td>0.9 or larger</td>
<td>0.914</td>
</tr>
<tr>
<td>4 RMSEA</td>
<td>0.08 or less</td>
<td>0.074</td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation
For this CFA model, the chi-square ($\chi^2$) value is close to zero ($p < 0.001$), which indicates that the model does not fit the data as the $p$-value rendered must be greater than or equal to 0.05 (Suhr, 2006, 7; Adams, Nelson & Todd, 1992, 234). However, the $\chi^2$ measure is highly sensitive to large sample sizes (Argyrous, 2011, 452; Hevey, Pertl, Thomas, Craig & Chuinneagain, 2010, 655). It is then often appropriate to conclude that the CFA model fits the data even if $p$ is significant (Wang & Witt, 2002, 15). The chi-square divided by degrees of freedom ($\chi^2 / df$) rendered a value of 4.284, which indicates a good fit as ratios of 3, 4 or even 5 are representative of a good model fit (Mueller, 1996, 83; Adams et al., 1992, 234). The comparative fit index (CFI) rendered a value of 0.914 for this CFA model, indicating a good fit (De Bruin, 2004, 23; De Bruin & Bernard-Phera, 2002, 4), as it must render a value of 0.9 or larger (Mueller, 1996, 90; Vos, Ellis, Van der Westhuizen & Mentz, 2013, 10; Cheung & Rensvold, 2002, 235). The root mean square error of approximation (RMSEA) value is 0.074 and 90% CI of [0.069; 0.079], indicating an adequate fit of the CFA model to the data as values of 0.08 or less indicate adequate to reasonable fit (Vos et al., 2013, 10; De Bruin & Bernard-Phera, 2002, 4). A 90% confidence interval (CI) for the criterion is also given, of which the upper limit should ideally be below 0.06, but it is acceptable if it is under 0.08 (Vos et al., 2013, 10).

Three fit indices indicate adequate to good fit and one fit index is close to indicating acceptable fit – as the $p$ value of the $\chi^2$ statistic is significant and very small discrepancies would have led to a significant $\chi^2$ (De Bruin, 2004, 23). It can then be stated that the scale’s original factor structure provides acceptable and valid results based on the findings of the CFA (Acar, 2014, 975). Construct validity is therefore supported (De Bruin, 2004, 24) and the scale can be seen as a valid measure in determining the arts festivals’ contribution to the performing arts.

**Results on the reliability of the measurement scale**

The internal consistency of the items of the five extracted factors is indicated by Table 7. All factors have a Cronbach’s alpha coefficient value ($\alpha$-value) greater than 0.7, namely Factor 1 (0.863); Factor 2 (0.890); Factor 3 (0.705); Factor 4 (0.801); and Factor 5 (0.850). All factors also obtained a mean inter-item correlation value of greater than 0.4, namely, Factor 1 (0.559); Factor 2 (0.574); Factor 3 (0.445); Factor 4 (0.502); and Factor 5 (0.586).

| Table 7: Reliability |
|---------------------|-----------------|-----------------|-----------------|
| FACTOR              | CRONBACH’S ALPHA | INTER-ITEM CORRELATION | ITEM                                |
| Emotional Contribution (Factor 3) | 0.705 | 0.445 | a Inspires people to become artists 0.578 |
|                      |                 |                  | b To attend more performing arts 0.488 |
|                      |                 |                  | c To join art associations 0.514 |
| Economic Contribution (Factor 4) | 0.801 | 0.502 | d Increase in ticket sales 0.595 |
|                      |                 |                  | e Employment opportunities 0.696 |
|                      |                 |                  | f More stable income for artists 0.635 |
Based on the high Cronbach’s α-values and inter-item correlation values, the factors can be regarded as reliable and practically meaningful as items belong to the same scale (Adams et al., 1992, 230). It can be assumed that the respondents perceived internal consistency in items contributing to each contributing factor and that the respondents had understood the questions (Vos, et al., 2013, 16). The reliability of the scale supports substantive validity (Andres, 2012, 120), convergent validity (Bayaga, 2012, 284), and construct validity (Löwe, Wahl, Rose, Spitzer, Glaesmer, Wingenfeld, Schneider & Brähler, 2010, 90). The results can also be generalised to the entire population, supporting external validity (Andres, 2012, 118; McMillan & Schumacher, 2001). These are discussed below:

- **Factor 1, Quality and Education Contribution**, had a Cronbach’s alpha of 0.863 and mean inter-item correlation value of 0.559, indicating that the items do indeed measure quality- and education-related contributions. This confirms the findings of Quinn (2006), Dunjic (2011), and Hughes (2012, 13);

- **Factor 2, Growth and Development Contribution**, obtained a Cronbach’s alpha coefficient of 0.890 and a mean inter-item correlation of 0.574. All of the mean values are above 0.6, which indicates that the items measure growth- and development-related contributions. This confirms the findings of several researchers (Korza & Magie, 1989, 3; Quinn, 2006, 302; Anheier & Isar, 2008, 263; Hauptfleisch, 2001, 170);

- **Factor 3, Emotional Contribution**, obtained a Cronbach’s alpha coefficient of 0.705 and a mean inter-item correlation of 0.445. All the mean values of the items were larger than 0.4. This correlates with

### Findings

Firstly, this study confirmed that it is possible to measure the contribution that an arts festival makes to the performing arts, as the scale is a valid and reliable measure. The scale measures what it is supposed to measure. This is concurred by the EFA, which confirms the construct validity of the scale where all communalities of the factors were greater than 0.3. All five extracted factors had high Cronbach’s alpha coefficients and mean inter-item correlation values. Therefore, sufficient variance of each item was explained through the five extracted factors based on a five-point Likert scale and that each factor was strongly indicated by its respective items (Table 2). Based on this, the factors can then be regarded as being reliable. The results can also be generalised to the entire population, supporting external validity (Andres, 2012, 118; McMillan & Schumacher, 2001).

### Table 2: Correlation Matrix for the Items

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>Increase in CD and DVD sales</td>
<td>0.536</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Quality experience</td>
<td>0.666</td>
<td></td>
</tr>
<tr>
<td>j</td>
<td>Quality of artists</td>
<td>0.728</td>
<td></td>
</tr>
<tr>
<td>k</td>
<td>Development of skills</td>
<td>0.700</td>
<td></td>
</tr>
<tr>
<td>l</td>
<td>Improves knowledge</td>
<td>0.702</td>
<td></td>
</tr>
<tr>
<td>m</td>
<td>Promotes research</td>
<td>0.622</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>Promotes the image of performing arts</td>
<td>0.665</td>
<td></td>
</tr>
<tr>
<td>o</td>
<td>More aware of productions in country</td>
<td>0.696</td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>Markets well-known / new artists</td>
<td>0.714</td>
<td></td>
</tr>
<tr>
<td>q</td>
<td>Networking opportunities</td>
<td>0.679</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>Number and variety increased</td>
<td>0.713</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>Development of other arts festivals</td>
<td>0.641</td>
<td></td>
</tr>
<tr>
<td>t</td>
<td>Increase in production of CDs and DVDs</td>
<td>0.714</td>
<td></td>
</tr>
<tr>
<td>u</td>
<td>Growing number of artists</td>
<td>0.699</td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>Financial contribution</td>
<td>0.715</td>
<td></td>
</tr>
<tr>
<td>w</td>
<td>Develops infrastructure</td>
<td>0.765</td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ own compilation
the findings from several researchers (Reeves, 2002, 29, 30, 37; Axelsen, 2006; Schwarz & Tait, 2007);

- Factor 4, Economic Contribution, had a Cronbach’s alpha of 0.801 and a mean inter-item correlation of 0.502. All the items had mean values larger than 0.5. This confirms the findings of Korza and Magie (1989, 3), Saayman and Saayman (2006), Allen et al. (2012, 61), Snowball (2010), and Jonker et al. (2009, 383); and

- Factor 5, Marketing Contribution, had a Cronbach’s alpha of 0.850 and a mean inter-item correlation of 0.586. All the mean values were larger than 0.6. This confirms several researchers (Bonus & Ronte, 1997, 112; Van der Vyver & Du Plooy-Cilliers, 2006, 192; Hutter & Throsby, 2008; Hughes, 2012, 154).

Secondly, there were very strong and positive relationships between the five extracted factors and these are as follows:

- There is a positive correlation of 0.794 between the Emotional Contribution and the Economic Contribution. This could be so because attendees tend to participate in the arts based on the economic factors (Veldhuis, 2003). If, according to the attendee, the price of an item is too high or too low, then participation in purchase or attendance might be influenced. Except in the case when the attendee prefers the specific art form – the Economic Contribution will then play a minor role in the decision to participate or attend. This finding is somewhat confirmed by Swami et al. (2010, 855), who found that when a visitor prefers something, it might lead to future personal involvement. Performing arts are arts activities, usually where the purchase of tickets needs to be done in order to participate in the activity or to experience it (Zijlmans & Van Damme, 2008; Heilbrun & Gray, 2001, 4), thereby leading to higher ticket purchases by those who prefer the performing arts;

- A positive correlation of 0.784 was obtained between the Emotional Contribution and the Quality and Education Contribution. Attendees might be more motivated to purchase or attend arts products or activities when it is of high standard. If the attendee is educated in the arts industry, then he/she will be able to make a more expert opinion on the standard of the arts product (Tobias, 2004, 110). In the case of the artist, the more educated and experienced he/she is, the higher the standard of the arts product that can be developed (Dunjic, 2011), which, in turn, might lead to greater participation in and attendance of the arts by the attendee (Reeves, 2002, 29);

- A positive correlation was also obtained between the Emotional Contribution and the Marketing Contribution with a correlation of 0.712. To encourage emotional participation in performing arts, the attendee must be made aware of the different performing arts products and activities on the programme of the arts festival (Bhattacharya, Rao & Glynn, 1995; Tobias, 2004, 11; Dimaggio & Useem, 1978, 187; Heilbrun & Gray, 2001, 399);

- The correlation between the Growth and Development Contribution and Emotional Contribution was also positive, with a correlation of 0.796. The performing arts will grow (in number and variety of artists and activities) as more people will be attending and participating in the performing arts. Growth and development in the arts will also
occur if people outside the arts industry are inspired to become artists themselves (Bonus & Ronte, 1997, 104). A study done by Pretorius (2012, 114) indicates that when someone is exposed to the arts during his/her childhood, it will increase arts involvement in later years. This was confirmed by Dimaggio and Useem (1978, 187), Heilbrun and Gray (2001, 399) and Hughes (2012, 62);

• A positive correlation of 0.834 was obtained between the Economic Contribution and Quality and Education Contribution. People will be more willing to purchase tickets or participate in the performing arts when it is of a high standard. Arts products can only be of a high standard if the artist is knowledgeable and experienced. In addition, their study indicated that satisfaction with the arts was due to festival visitors' familiarity and knowledge about an individual art form (or in several forms) and artist (well-known or new artists in the market). People with experience in the arts can make an expert opinion concerning the quality of the arts product or activity and may be willing to purchase large quantities or pay expensive rates for a high standard of quality arts products. Tobias (2004, 110) confirms this and states that the more exposed and experienced an attendee is in the arts, the more familiar he/she becomes with the arts environment, and the greater the development of expert opinion and preference was that occurred within these individuals;

• There was also a positive correlation of 0.776 between the Growth and Development Contribution and the Economic Contribution. If quality arts products are affordable for people to purchase or attend, it might lead to growth in arts products and activities, such as growth in CD and DVD sales of music productions. The financial support of arts festivals to the performing arts (such as the arts festival sponsoring a theatre production of students) may lead to more theatre productions in general. If arts festivals provide an additional income for artists, this might stimulate participation in the arts (for example, becoming a performing artist) leading to growth in the number and variety of artists (Faulkner et al., 2001, 138);

• A positive correlation of 0.815 was obtained between the Economic Contribution and Marketing Contribution. If the arts festival makes the people aware of the arts products and activities on offer, more people will participate in and attend the arts, leading to greater sales of ticket or music-, dance- and drama productions. This confirms the studies done by Bonus and Ronte (1997, 104), Hughes (2012, 154), Quinn (2006, 294), Kitshoff (2004, 238) and Korza and Magie (1989, 3);

• A positive correlation of 0.824 exists between the Growth and Development contribution and Quality and Education contribution. The quality of the performing arts will develop when artists are more experienced and develop their skills themselves (Kent, 2004). The more arts festivals there are, the more knowledgeable and experienced the artists become, leading to quality performing arts products and activities. This will lead to the growth in the performing arts in general. This confirms the findings of Viviers, Botha, Slabbert, Seymour, Saayman and Saayman (2012, 56) at the KKNK in 2012, which indicated that 51% of respondents who formed part of the survey were not influenced by the festival to join the arts, although their knowledge and awareness of these arts had increased;
• The correlation between the Quality and Education Contribution and Marketing Contribution was also positive, with a correlation of 0.852. The arts festival can market the festival as offering quality arts products and activities, creating curiosity and stimulating participation in the performing arts (such as attending a production or joining an arts association; for example, a drama club). A high level of exposure indicated involvement in the arts (Reeves, 2002, 37; Page & Connell, 2009, 393), and a high level of involvement in the arts meant that the visitors could respond with expert opinions concerning the festivals’ contribution to the arts (Tobias, 2004, 110); and

• A positive correlation of 0.889 exists between the Growth and Development Contribution and Marketing Contribution. If the arts festival can stimulate attendance and participation in the arts through effective marketing, growth and development in the performing arts can occur. People will be more aware of new and well-known artists and they will be aware of quality arts products, such as theatre productions (Veldhuis, 2003; Bhattacharya et al., 1995).

Fourthly, the finding of the CFA confirms the results of the EFA, which indicated that all items grouped under the factors as shown in the original scale. All the estimates of the regression coefficients and correlations were significant for the five extracted factors. The model fit well, as was indicated by four CFA goodness-of-fit indices. The p-value of the $X^2$ is small ($p < 0.001$), which indicates that the model does not fit well, but this is due to the large sample size and small discrepancies would have led to a fit. The $X^2 / df$ yielded a value of 4.284, which indicates that the model fit well. The CFI value of 0.914 also indicates a good fit. The RMSEA yielded a value of 0.074 and 90% CI of [0.069; 0.079], thereby indicating an adequate fit (Vos et al., 2013, 10; Suhr, 2006, 1, 2). The internal validity of the scale is supported.

Implications and recommendations

The following can be identified from the results and findings:

Firstly, as the items under each factor measure that which they are supposed to, it is then possible to measure each contribution that an arts festival makes respectively. The measurement scale will allow management and organisers to better tailor their specific contribution efforts to the performing arts. Through the identification of weak areas with regard to contributions to the performing arts, valuable resources can be allocated to these areas for effective and efficient improvement. In contributing to the performing arts, several recommendations can be made. These are discussed below:

• For an arts festival to contribute to the education of the performing arts, the arts festival can look specifically at ways to improve the skills and knowledge of the artists and attendees by providing performing arts-related workshops (for show-and-tell illustrations), seminars and public speeches to all the stakeholders involved. Furthermore, provide research opportunities to determine shortcomings in the contribution to the performing arts.

• By contributing economically to the performing arts, the arts festival can establish a fund for the performing arts – activities can include the raising of funds for the performing arts during the arts festival and incorporating these funds for educational purposes (for example, providing workshops) or provide additional financial support for struggling actors, dancers or singers. The arts festival can also employ performing artists to do marketing for the festival (for example, the arts festival can ask performing artists to make the theme of the festival stand
The arts festival can make an emotional contribution to the performing arts by ensuring opportunities for attendee participation in the performing arts. These may include providing the opportunity to go on stage with the actors, singers or dancers through competitions where the most creative and innovate potential singer, dancer or actor wins a prize (for example, by having the chance to go on stage).

The arts festival can contribute to the quality of performing arts by ensuring high qualification standards in order for artists to portray their talent at the festival. The evaluation of quality arts productions must be done throughout the duration of the festival.

The marketing contribution of the arts festival to the performing arts can be improved by placing noticeboards with advertisements of the performing arts on the festival grounds. Let the community be part of the festival through street-theatre, whereby they stimulate positive word-of-mouth regarding the festival and how the festival also includes them in their arts programme.

The arts festival can stimulate other performing arts initiatives (outside the duration of the festival), such as weekly meetings for actor-club members in towns. This will create awareness of the performing arts, even when the festival is not hosted. This can contribute to the growth and development of the performing arts.

Secondly, for an effective and efficient contribution to the performing arts, it is necessary to consider factors that have a positive relationship between them, as this will aid in the contribution process. In order for the arts festival to contribute to the performing arts, it can offer affordable arts products and activities of high quality for the attendee to enjoy or to stimulate purchase by introducing selection requirements for arts products and activities to be hosted at the arts festival. The attendee can be made aware of the performing arts. The more exposed or aware the attendee or future participant is of the performing arts at the festival, the greater the level of participation in the performing arts will be, i.e. attending a production or becoming an artist him/herself. The attendee can also be educated in the performing arts by providing arts-related workshops and competitions for him/her to broaden his/her knowledge concerning the performing arts. By contributing through all the factors, the arts festival can lead to the life keeping of the performing arts. The festival must then ensure that all aspects of contributions are taking place for the growth and development of the performing arts.

Lastly, the measurement scale to determine the arts festival's contribution to the performing arts is a valid and reliable instrument. It is recommended to apply the scale at other arts festivals in South Africa to determine their contribution to the performing arts. The scale can also be taken to other performing arts-related organisations and even to the international locale.

**Conclusion**

This paper set out to determine the research objective, namely to standardise the current arts contribution measurement scale for the performing arts. The usefulness and applicability thereof were assessed. A number of implications and recommendations were drawn from this quantitative assessment. The results of this paper indicate that the arts contribution measurement scale is a reliable and valid instrument in determining the arts festival's contribution to the performing arts in South Africa. Emphasis was placed on the need for a standardised measurement scale at arts festivals in their determination of the contribution they make to the performing arts. The data was analysed by means of an exploratory factor analysis, followed by
a confirmatory factor analysis. Both these statistical methods confirmed the validity and reliability of the scale. This paper would be of significance for managers and organisers of arts festivals in their aim to contribute to the performing arts, and to improve their current contribution. The paper will also aid as guide in the standardisation of other measurement scales in the academic field. Further research can be conducted for comparative purposes.

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