To art or not to art? That is the communal question![*]

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Resumen

La Zona Sur de Costa Rica comprende un área unos 8500 km^2 y una población de menos de 200 000 habitantes distribuídos en 27 districtos. Aunque existe un alto interés por todos los géneros artísticos, no hay un solo centro de artes, ni siquiera un escenario apropiado para uso del talento local, con la excepción de San Vito. JUDESUR ha indicado el interés por financiar la construcción de centros de artes en las comunidades, siempre y cuando éstas puedan mantenerlo y continúen usándolos indefinidamente. Esta investigación pretende determinar cuales distritos tienen las condiciones para establecer y mantener operando "centros de artes" de manera sostenible. Para lograr este objetivo es necesario usar un modelo de estudio de mercado modificado basado en herramientas estadísticas. De ahi que se este estudio utiliza mas indicadores socio-económicos y varias mediciones cualitativas como datos primarios. Tanto los datos de los censos como aquellos de una encuesta de conveniencia son analizados usando el método de componentes principales, o análisis ortogonal, para determinar la situación de cada comunidad y su posición relativa al distrito de San Vito. Los resultados sugieren que solo unos pocos distritos tienen la combinación socio-económica y de interés apropiada para mantener un centro de artes operando de manera sostenible.
Palabras claves: arte comunitario, arte escénico, viabilidad del arte, Costa Rica rural.

Abstract

Southwestern Costa Rica comprises an area of over 8500 km^2 and a population of less than 200 000 inhabitants, divided into 27 districts that vary in size and population. Although there is a high level of

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interest in all forms of art, there is not a single art centre or even a hall with a stage for local talent, with the exception of the San Vito district. JUDESUR, the regional funding agency, is willing to support the construction of local art centres, provided each theatre can continue operating independently. This study attempts to determine which districts have the best conditions to establish and continue operating an "Arts Centre" on a sustainable manner. To achieve this objective, it is necessary to use a modified market feasibility study that relies on statistical tools. Thus, we took the approach of using more socio-economic metrics and various qualitative measurements as the basic data. Both census and convenience survey data are analysed using the principal component analysis to determine their condition and relative position in comparison to the San Vito district. The results suggest that only a few districts have the socio-economic conditions and community interest to support a local arts centre.
Keywords: community art, performing arts, art feasibility, rural Costa Rica.

Introduction

On the question whether a small rural community should have an art centre or not, the answer lies somewhere between the local interests for the arts and the reality of the economic conditions of that town. On one hand cultural factors such as ancient re-enactments of the conquest by the Spanish conquistadors or art-crafts and dances that have a collective self-reassurance in a community might play in favour of supporting the establishment of an art centre. While on the other hand the harsh reality of a local economy dependent on subsistence farming might limit the possibility for an art centre to be able to sustain itself just with the local patronage. Yet, many small communities in Southwestern Costa Rica (Zona Sur) very enthusiastically consider that having an art centre is the logical step ahead in consolidating the cultural and economic identity of the rural community itself. Thus, in order to find a way for the art enthusiasts and promoters to rally support for local art centres, this research attempts to provide an answer to the art question and to generate reliable data for the local art promoters to use in their struggle to materialise art centres in their respective communities.

Southwestern Costa Rica comprises an area of over 8500 km2 and a population of less than 200 000 inhabitants. This region is divided into 27 districts that vary in size and population; most districts only have one main town or community. Although there is a high level of interest in all forms of arts, especially performing arts, there is not a single theatre or even a hall with a stage for local talent to perform a production, or for visiting artists.[i] The only exception is a theatre with a small stage at the "Cultural Centre" in the district of San Vito, and because of its inappropriate design and size it is not used as much as local people would like to. The additional limitation is that this Cultural Centre is not operating as such because it only serves to rent space for commercial purposes and not to promote the arts. Performing arts, and all arts for this matter, in the Southern Zone are mainly concentrated in and around the activities of secondary schools. But, once students leave school, there is no follow up on the development of their talents, abilities and interests. As indicated in the "Diagnostics" (Quirós, 2011, p. 17), there is a big interest and need for art centres, and training of the leaders so that they can develop and consolidate the performing arts movement in the Southern Zone. JUDESUR, the regional funding agency, is willing to support the construction of local art centres or theatres. But the communities

[i]More than 360 informants provided information about art production and consumption in (Quirós, 2011).

themselves do not know if they are able to continue operating the centres just with the local patronage once they are built, as per a requirement of this funding agency.

The main objective of this study is to determine which districts have the best conditions to establish and continue operating a cultural centre on a sustainable manner. To achieve this objective, two relevant factors must be taken into account: the low population density (Census, 2011),[ii] and the limited income of most residents. Therefore, the traditional market feasibility study in which demographics, purchasing power, and tourist flow are mostly the only factors considered was not an appropriate model for this case.[iii] Thus, we took the approach of using additional socio-economic metrics, various qualitative measurements, and the case of the "Cultural Centre" in San Vito as a parameter, or control, to compare to other districts. Most importantly, we employ principal component analysis as the main tool. This analytical approach allow us to scale all communities and determine if it has similar or better position than San Vito to operate an arts centre on a sustainable manner. In order to measure and compare all 27 districts, we combine two types of data. One set of data is the qualitative opinions collected with a questionnaire from 762 informants. The other set is the quantitative data about demographics and economics from secondary sources such as the National Institute of Statistics and Census and the State of the Nation.[iv] Both sets of data are analysed using the principal component analysis (Pearson, 1901) and the conclusions are drawn based on its results.

Methodology

A series of visits to every district was planned and carried out the field data collection between 5 May and 27 November of 2013. Data were collected using the convenience survey method by means of a 14-question questionnaire. The questionnaire helped us collect information about local organisations and people involved in the arts and about opinions related to the patronage of a cultural or art centre. The information from the first 7 questions is not included in the analysis because they ask about local people and organisations interested in the arts,

[ii] According to the 2010 Census, the district of Colinas has a total population of 1 371 inhabitants spread across 122 Km^2, and no urban area.
[iii] An example of a traditional market analysis for arts centres is: Economics Research Associates (2007).
[iv] "Estado de la Nación" is an independent research organisation sponsored by all public universities in Costa Rica.

therefore are not quantifiable. The last 7 questions collect data about perceptions on interests, participation, capacity to pay for attending performances, estimated weekly attendance, interest on learning about arts, and their opinion about the level of success a cultural centre would have in their respective communities (districts). The informants were approached in grocery stores, supermarkets, public medical dispensaries, hardware stores, secondary schools, restaurants, university campuses, bazaars, video-game parlours, municipal offices, bank offices, and even walking on the streets.

This study supports the hypothesis that all districts have the conditions to operate a cultural centre. This study is to demonstrate if this hypothesis is valid or not in each district. The resulting information is compared against that of the district of San Vito. The reason for selecting this district as a parameter (or control) is because San Vito has the experience of staging performing art events such as theatre, comedy groups, modern dance, etc., with relative good success since the mid-1990s. This means that those districts that equal or exceed the marks achieved by San Vito have better chances of viability than those with lower marks.

To analyse the two sets of data we use the principal component analysis. This is a mathematical model using the orthogonal transformation procedure to convert a set of possibly correlated variables into a set of values of linearly non-related variables called principal components. This transformation is defined in a way that the first principal component has the greatest possible variability, and each succeeding component has the highest possible successive variability under the constraint that it is unrelated with the previous components.[v] In the particular case of this research, the first principal component corresponds to review data generated by the questionnaires. They have the greatest variability of all data collected. The second component is the statistical data about the population, school enrolment rates and size of the three sectors of the local economy. This method ensures that the principal components are independent so long as the data sets have a normal distribution as a whole. An additional advantage of this analysis is that it compensates for the different scales used in both sets of data.

Given the analytical model, the factors most related to the operation and functioning of a

[v] "principal component analysis." Definitions.net. STANDS4 LLC, 2014. Web. 28 July. 2014. <http://www.definitions.net/definition/principal component analysis>.

community cultural centre are: 1) number of people who can attend a show every week, 2) the possible level of success of the cultural centre, 3) the interest to learn any type of arts, and 4) interest in having an arts centre in their own district. Quantitative data of each district obtained from the 2010 Census included in the analysis are: 5) urban population, 6) the distribution of the three sectors of the economy, and 7) level of schooling. The first four factors are from the questionnaires; the other 3 are from the national census of 2010[vi] and the reports of the State of the Nation, 2011 and 2012.

These 7 factors are selected for the following reasons. The first factor is the number of people who could attend the centre to watch shows weekly. This average number of possible attendees per district is important since this is the target population. The basic premise used in this measurement is that the possible number of people who could attend provides a value that relates to all the other factors in giving us a potential of viability. The second factor is the average opinion on the potential success of the cultural centre. This is a scale that measures favourable opinion that people feel about a cultural centre. Then, the next component is an average of the interest in having the cultural centre in the community. This opinion of interest provides a mark about the general interest to support this centre. The fourth factor is the average interest in learning about arts. This factor is based on the principle that if a population is interested in learning, then that population will be interested in supporting the local cultural centre.

The next factor is the data about urban population. These data are important because the size of the population living relatively close to the cultural centre will be the primary user group. Therefore, the larger the urban population, the greater the number of potential users of the centre. The sixth factor included is the sectors of the economy of each district. We use the premise that the larger the secondary and tertiary sectors are in relation to the primary sector, then the district economy has a population group with a higher purchasing power to devote time and resources to supports the arts.[vii] Finally, the level of education of the district population is included because there is an understood correlation between education and interest in the arts. The premise is that

[vi] Instituto Nacional de Estadística y Censos provided the appropriate data for all 27 districts studied.
[vii] The premise is that economies with larger secondary and tertiary sectors are those with higher purchasing power.

the more educated the population is, the more interest they will have to sponsor the arts within the district.[viii]

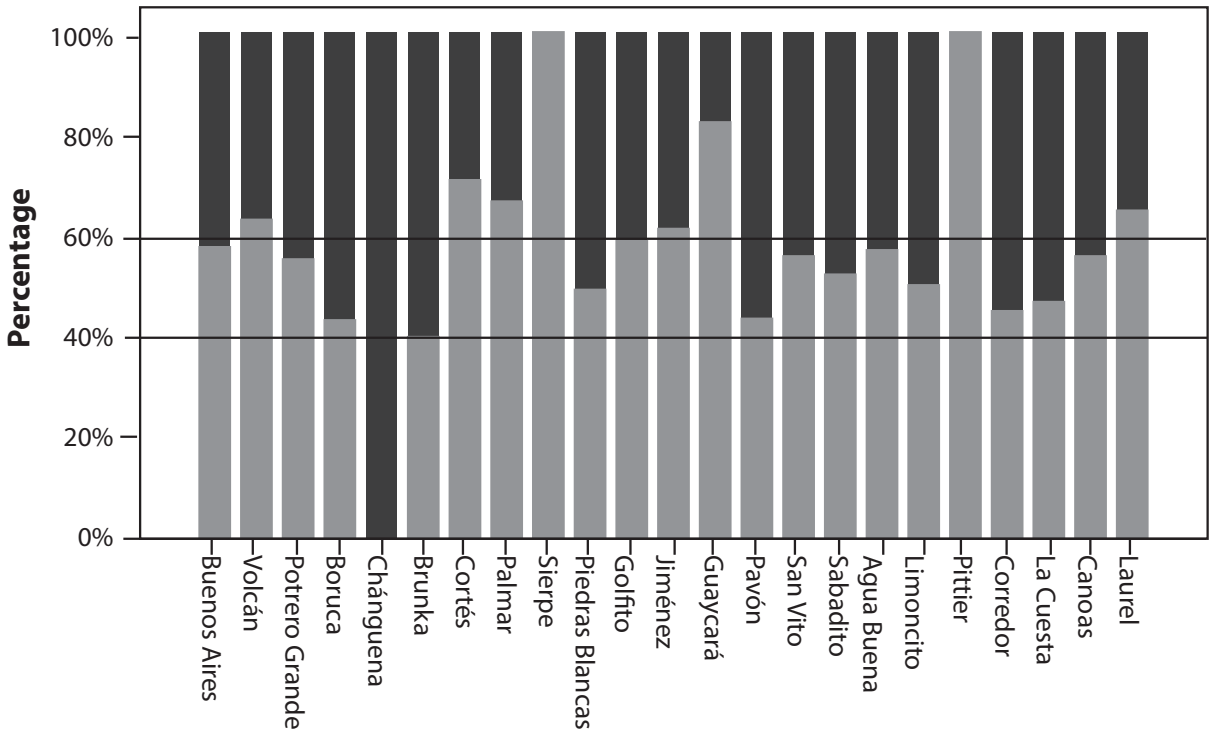
To test the hypothesis that all districts have the conditions to build and operate a community cultural centre in a sustainable way, we analyse the data according to the model of principle component analysis with SPSS, v. 20. To proceed with the analysis, first it is necessary to prepare the data by means of creating averages of the questionnaire's raw data and by making two preliminary principal component analyses of the economic and education levels data. These octagonal reductions are necessary because both the data about the sectors of the economy are made out of three different measurements, and that of the education is made of the 26 different ones. These economic data relate to the primary sector which consists of agricultural production and fishing, the secondary sector corresponds to the industry such as manufacturing, and the tertiary sector corresponds to services such as education, banking and intellectual production such as computer software, professional services, etc. The education data are composed of 26 different measurements for each of the 27 districts. Thus, by applying a preliminary factor analysis we reduce the three economic factors into a single one, and the 26 educational factors into three.

The questionnaire averages and the orthogonal reductions of the economy and education are the source for the final factor analysis. Furthermore, considering that the districts of Chánguena, Pilas and Colinas have very deficient road systems and locating informants is difficult, only a handful of people were sampled. It was then decided not to conduct the survey in the remaining districts that do not have urban population. Therefore, the districts without urban population reflect a-priori negative preliminary data. Consequently, the final analysis excludes those districts that have no urban population. The only exception is Limoncito, which is easily accessible by paved road. The questionnaire data collected in this district also serve to demonstrate the status of a district without urban population.

Considering that a convenience survey might have a sample selection bias, a series of tests and analyses were conducted in order to understand how that bias might affect the final results. The first test was a comparison of the age groups sampled with the 2010 census; it shows that the 12 to 17

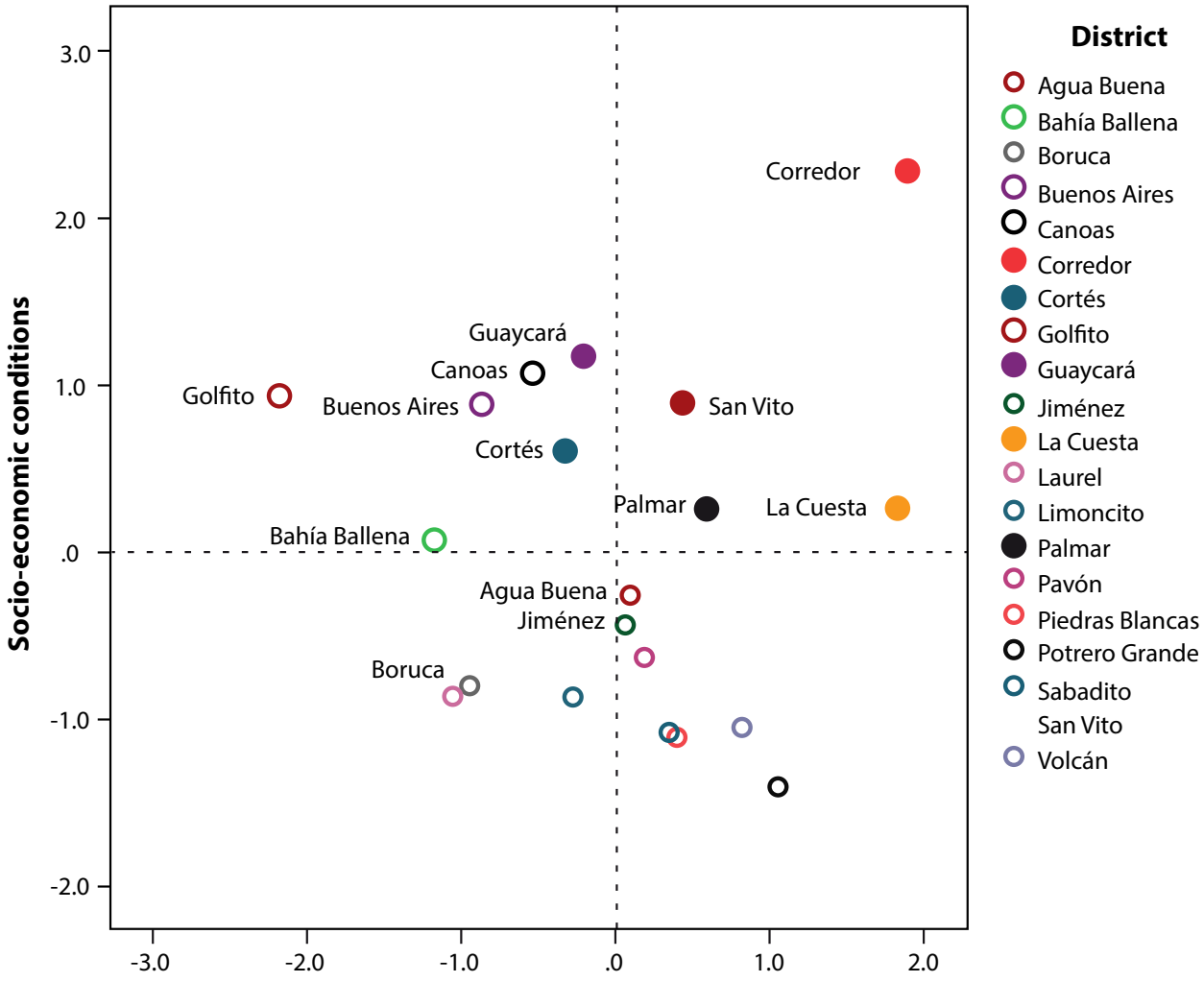
[viii] Paul DiMaggio and Michael Useem (1978) make a compelling argument in favour of the relationship between class and art consumption.

Figure 1. Percent of men and women sampled during the survey per district. Horizontal lines show the acceptable limits of a similar distribution of female to male ratios; any values above of below this ratio are considered an over-representation of a given gender in the sample.



age group is over-represented in our sample, while the 18 to 25 and the 26 to 71 groups are slightly under-represented by approximately 4 percent. The second test was to understand if there was an over representation of any particular gender (i.e., one gender is represented by more than 60%). We found that the overall female:male ratio was 56:44; however, the districts of Sierpe and Pittier have a female over-representation of close to 100 percent, and the opposite is true for Chánguena. Pittier and Chánguena were already excluded from the final analysis because of a lack of an urban population. Six additional districts show a female-biased sample (Figure 1). Finally, to determine if over-representation of a particular gender or age may bias the results of our survey, we ran a linear mixed model to test how district, gender, and age may influence the variables related to interest (see Figure 2). For this analysis, we used the same variable extracted from the principal component analysis explained earlier.

Figure 2
Scatter plot based on principle component analysis of both census statistics and questionnaire responses from 762 informants



Results

Initial results indicate that the "average payment" variable has very little correlation with the other survey questions and it actually is more related to the socio-economic component data. This factor would skew the results since it would be transferred to the other component; thus, our decision not to include it. Table 2 summarises the data from the questionnaires as averages and

Urban population per district, averages for attendance, payment, success, interest for an arts centre, and interest to learn arts. This table also includes the reduced data for the sectors of the economy, and reductions for the levels of education, based on principle component analysis.

Table 1

District	Avg. Attendance	Avg. Payment	Success	Urban Population	Economy Sectors	Interest for a centre	Interest to learn	Higher Schooling	Lower Schooling	Technical Schooling
Buenos Aires	101,78	2,58	7,76	14.031,00	0,17	2,84	3,27	-0,18	3,42	0,98
Volcán	99,70	2,09	8,03	615,00	-0,73	3,21	3,55	-0,55	-0,28	-0,44
Potrero Grande	82,76	1,82	8,08	676,00	-0,68	3,37	3,61	-0,90	0,72	-0,53
Boruca	61,60	1,64	7,53	454,00	0,17	3,04	3,25	-0,26	-0,61	-0,46
Pilas	0,00	0,00	0,00	0,00	-1,81	0,00	0,00	-0,60	-0,76	-0,44
Colinas	0,00	0,00	0,00	0,00	-1,79	0,00	0,00	-0,46	-1,01	-0,38
Cháguena	20,00	3,00	7,00	0,00	-1,78	2,00	3,00	-0,77	-0,36	-0,46
Biolley	0,00	0,00	0,00	0,00	-1,13	0,00	0,00	-0,47	-0,62	-0,51
Brunka	108,67	1,67	8,47	1.293,00	-0,74	3,27	3,33	-0,62	-0,33	-0,49
Cortés	76,71	2,02	7,89	4.697,00	1,40	3,18	3,31	0,88	0,13	-0,91
Palmar	98,23	2,56	8,02	4.909,00	0,76	3,31	3,47	0,36	0,41	0,24
Sierpe	91,52	1,96	7,35	823,00	-0,06	3,22	3,39	-0,55	-0,10	-0,50
Bahía Ballena	80,00	2,44	7,38	199,00	1,51	3,00	3,25	0,08	-0,87	-0,47
Piedras Blancas	79,15	2,49	7,89	570,00	-0,32	3,15	3,60	-0,49	-0,25	-0,35
Golfito	81,95	2,03	6,98	7.598,00	1,11	2,71	3,15	1,05	-1,77	3,38
Jiménez	64,43	2,18	7,98	3.036,00	0,77	3,23	3,48	-0,29	-0,32	1,46
Guaycará	119,29	2,29	7,86	7.100,00	1,16	3,04	3,29	0,76	0,20	1,21
Pavón	100,95	1,84	7,89	630,00	-0,21	3,30	3,19	-0,58	0,48	-0,63
San Vito	12,20	2,93	7,82	5.509,00	0,54	3,32	3,27	1,36	0,49	0,99
Sabalito	91,81	2,00	7,94	2.043,00	-0,35	3,08	3,58	-1,32	1,36	1,35
Agua Buena	99,66	1,80	7,61	1.287,00	0,28	3,23	3,39	0,23	-0,08	-0,51
Limoncito	92,50	2,00	7,31	0,00	-0,11	3,19	3,38	-0,42	-0,37	-0,37
Pittier	0,00	0,00	0,00	0,00	-1,26	0,00	0,00	-0,54	-0,52	-0,48
Corredor	128,36	2,77	8,60	11.097,00	1,10	2,91	3,09	3,75	0,74	-1,68
La Cuesta	118,24	2,47	8,47	1.922,00	0,87	3,53	3,59	0,54	-1,36	0,03
Canoas	92,22	3,00	8,22	7.132,00	1,12	3,11	3,00	0,70	0,47	0,22

Source: Author´s elaboration. Questionnaire data, 2010 Census, and Estado de la Nación 2012

the socio-economic information as factors. Only Urban Population is indicated as the actual number of inhabitants. The three factors about levels of education are the results of the initial component analysis from the original 26 variables of the Census data. The data for San Vito is marked in green only to serve as a visual point in reference since this district serve as "control."

Finally, we use the rotated data from components 1 and 2 (Table 2) to generate a scatter plot to visualise which districts have a positive combination of positive overall interest for scenic arts and socio-economic conditions. The discussion on the principle question about the possibilities to have an art centre or not is based on the scatter plot.

Sources: Questionnaire data, 2010 Census, and Estado de la Nación 2012.

The first component (1) in the resulting rotated matrix (Table 2) relates to the data about interests collected in the survey. In this matrix, it stands out that the most important factor is the "interest to have a cultural centre" followed by their opinion of "success", and then the "interest to learn about arts." The second component shows that the important factors are "level of schooling" (Higher Schooling), "urban population," and "economy sectors," respectively. In other words, the second component refers to the objective socio-economic variables of the census, and State of the Nation data.

Results from the final principal component analysis using the data from Table 1.

Table 2

	Components	
	1	2
Attendance	0,57	0,57
Success	0,84	0,23
Urban Population	-0,08	0,83
Economic Sectors	-0,23	0,78
Interest for arts centre	0,90	-0,8
To learn abour arts	0,78	-0,24
Higher Schooling	0,23	0,89

Source: Author´s elaboration

Finally, the results from the principal component analysis were processed into a scattered plot in order to observe the distribution of both components. In Figure 2 the vertical and horizontal dashed lines indicate a neutral measurement of 0. This means that from the vertical line to the right and from the horizontal line upwards the results are positive. Therefore, all districts in the upper right quadrant can be considered as districts with positive feasibility marks for having a cultural centre. Their relative position with that of San Vito in the graphic also serves to underscore their mark. We can see that the districts of Palmar, La Cuesta and Corredores share the

upper right quadrant with San Vito, indicating the most favourable conditions for the establishment of arts centres in these four districts. Palmar and La Cuesta, however, do not show the same higher level of socio-economic conditions but they have more local support than San Vito. Corredores, on the other hand, surpasses San Vito in both socio-economic and local support conditions, positioning itself as the most favourable district of all 27 studied.

There are six districts with positive socio-economic conditions located in the upper left quadrant. These districts, however, have lower interest levels. These are the cases of the districts of Golfito, Bahia Ballena, Buenos Aires, Canoas, Cortés and Guaycara. The remaining 10 districts are below the horizontal line indicating negative socio economic conditions. Eight out of the ten do have positive marks in the interest axis, especially Potrero Grande and Volcán.

The linear mixed model to test if over-representation of a particular gender or age may bias the results of our survey was significant for "district," as expected ($F_{19,630} = 2.21$, $P < 0.01$); this means that interest levels varied among districts (Figure 2). We also found that gender had a significant effect on the level of interest ($F_{1,630} = 6.26$, $P < 0.05$), with men exhibiting significantly higher levels of interest than women. This means that our results for districts with an over-representation of women in the survey (e.g., Cortés, Palmar, and Guaycará, among others; Figure 1) may yield lower levels of interest than would occur with a more even sample.

Discussion

The main objective of this research was to determine the viability of operating a community cultural centre on a permanent basis in each district in Southwestern Costa Rica[ix]. For this, it is assumed that the community art centre should operate without external financial support. Thus, it is necessary to understand and measure the level of interest of the locals to stage productions, to have art exhibitions, and to pay for learning about art and to attend art offerings; all this in order to measure if the community is willing to support the daily operation of the centre. Because most revenues for the basic operating costs must come from the local community, it is also necessary to understand the demographics

[ix]All districts in the study area only have one main town, thus we use the terms district and community to refer to the same. The only exceptions of not having a town were noted for the districts of Pilas, Colinas, Chánguena, Biolley, Limoncito and Pittier.

and economics of the district. Based on the results of the analysis it is possible to both understand the viability of the art centres and draw conclusions about the appropriate size, number of classrooms/rehearsal rooms, and the seating capacity of each centre.

The results in Figure 2 indicate that if we use San Vito as a parameter of viability, then we have 3 other communities within the same quadrant of optimal conditions and interests. One such community exceeds this parameter. This is the case of Corredores (Neilly) which has the best socio-economic and interests level of all the Southern Zone. Neilly, and positions itself in the upper right corner of the graphic (Figure 2), far outperforms San Vito, and all other districts. One of the factors that stands out is that it has the highest rates of education levels of all (Table 1). One possible explanation may be the number of highly educated people working for the three university branch campuses and the palm oil laboratories, administration, and processing plants. The other two communities that are in the same upper right quadrant are Palmar and La Cuesta. Palmar has similar levels of interest as San Vito, but both are behind La Cuesta. La Cuesta and Palmar, however, are located in a position that is slightly lower in terms of socio-economic conditions relative to San Vito.

There are six districts with positive socio-economic conditions, but with lower interest levels. These districts located in the upper left quadrant are the districts of Golfito, Bahia Ballena, Buenos Aires, Canoas, Cortés and Guaycara. These districts can be considered as viable, because interest levels can vary towards the positive side when a service or option is made available in a community. And this consideration is especially true for Guaycara, Golfito and Buenos Aires, which have high socio-economic conditions, even slightly higher than San Vito. Actually, the district of Guaycara with an over-representation of women in the survey yields lower levels of interest than would occur with a more even sample. This means that with a more balanced representation, this district could have been placed in the upper right quadrant. The same can be noted for Cortés. The case of Bahia Ballena can also be considered within the range of positive feasibility since in this district there is a floating population of high-income foreigners living seasonally in the district, according to interviews with locals; this group of people is very participative and supportive of the arts.

The remaining 10 districts, though, do not show positive results in the socio-economic axis. Seven of them do have positive marks in the interest axis, especially Potrero Grande and Volcán. However, due to their very small urban populations, the socio-economic conditions seem to outweigh their interest and

enthusiasm. The results indicate that these 10 districts do not have the appropriate conditions overall to operate an art center on a permanent basis, and can be considered to have unfavorable viability.

For the 10 districts with positive socio-economic conditions, especially the four in the upper right quadrant, the conclusion is to establish a cultural center that is determined by the size of the urban population. Thus, we use the case of the National Theater and its relationship to the population of San José when it was built in 1890. Similarly, we use the relationship between the capacity of the theater of the Cultural Center of San Vito and the size of the current population of San Vito. According to the 1892 Census the population of San José was 19326 inhabitants. The National Theater was built for a capacity of 1040 people, but later reduced because of seating visibility problems. So we have a ratio of 1:18.58, or 5.38 per cent of the population of the city. In the other case, the population of San Vito is 5509 and the "Cultural Center" was built with a theater with a capacity for 300 seats. Therefore there is a ratio of 1:18.36, or 5.44 percentage of the population. Both indices show a very similar ratio. Then we can deduce that a 5 per cent of the urban population is a safe and viable minimum size for a theater seating capacity. For example, based on the population census of 2010, Neilly can build a theater with a capacity of 555 people. In addition, an arts center requires rooms for rehearsals, exhibitions, and teaching arts. Similarly we use the parameter of the San Vito Cultural Center, which has three large rooms for 80 people. If we divide the urban population of San Vito by 3 we have a coefficient of 1836, which can be rounded to 1840. So it can be concluded that a city like Neilly with a population of 11097 people can build an arts center with 6 rehearsal and teaching rooms, and theater with a capacity for 555 people.

Based on these conclusions, the promoters of each district can make their own calculations on the appropriate number of rooms and the theater capacity, depending directly on the size of the urban population. That is, the urban population is multiplied by 0.05 and the result should be the capacity of the theater. In order to determine the number of classrooms, it can be achieved by dividing the size of the urban population of each district by a factor of 1840. The result is the number of rehearsal/classroom that a given art center should have.

Whereas this research was done under the premise that every community cultural center should operate independently generating its own resources, then these results about operational feasibility serve to elucidate the conditions of each district as favorable,

slightly favorable or unfavorable. Moreover, this study also serves to demonstrate that the mathematical results might have to be measured within a mix of other considerations, such as the old traditions of the indigenous peoples of Boruca, even though such factors were not originally considered. For the most part, the analysis provides an answer that balances personal or community interests with the realities of the economic and demographic conditions of small communities in underdeveloped regions like Southwestern Costa Rica. Attempting to measure a market for a partly intangible product like art, especially performing arts, is a balancing act that will never be part of the local stage. But that balancing act generates data that speak for themselves. Therefore, the answer appears to be that there can be art, for a few communities.

The results of this research provide us with a better understanding of the possibilities for sustainable art in small communities. And, it also serves to validate that principal component analysis is a useful statistical tool in art research. This study also allowed us to understand that further inquiry into the intricacies of talent validation in relation to local patronage is necessary. We hope that this research serve to stimulate the use of statistical tools in art research and that would prompt more questions for future research particularly in community art.

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