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Estimation of Regional Economic Impacts of Musical Festival in Denmark

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Central themes of the paper

- Examining three festivals in Denmark (as case studies);
- Application of Danish inter-regional macroeconomic model, the LINE model, for analysing the economic effects of tourist spending at festivals;
- Results and the explanation for the local and spill-over effects.

Questions:

1. Are there spill-over effects to other regions besides its own region?
2. Does the regional structure where it holds musical festivals matter from a regional perspective?
3. What are implications for developing festivals for regional policies?

Findings from the analysis

- It shows there are spill-over effects to other regions beside the place where it holds festival.
- The regional structure, identified by the regional productivity, inter-regional trade structure, shopping and commuting patterns, plays an important role for magnitude of economic effects in the own municipalities and the effects spill-over to the other regions.
- From a regional policy's point of view, it prefers to attract more tourists to rural and peripheral areas due to the facts these regions face a higher unemployment rate and limited productive opportunities for regional development.

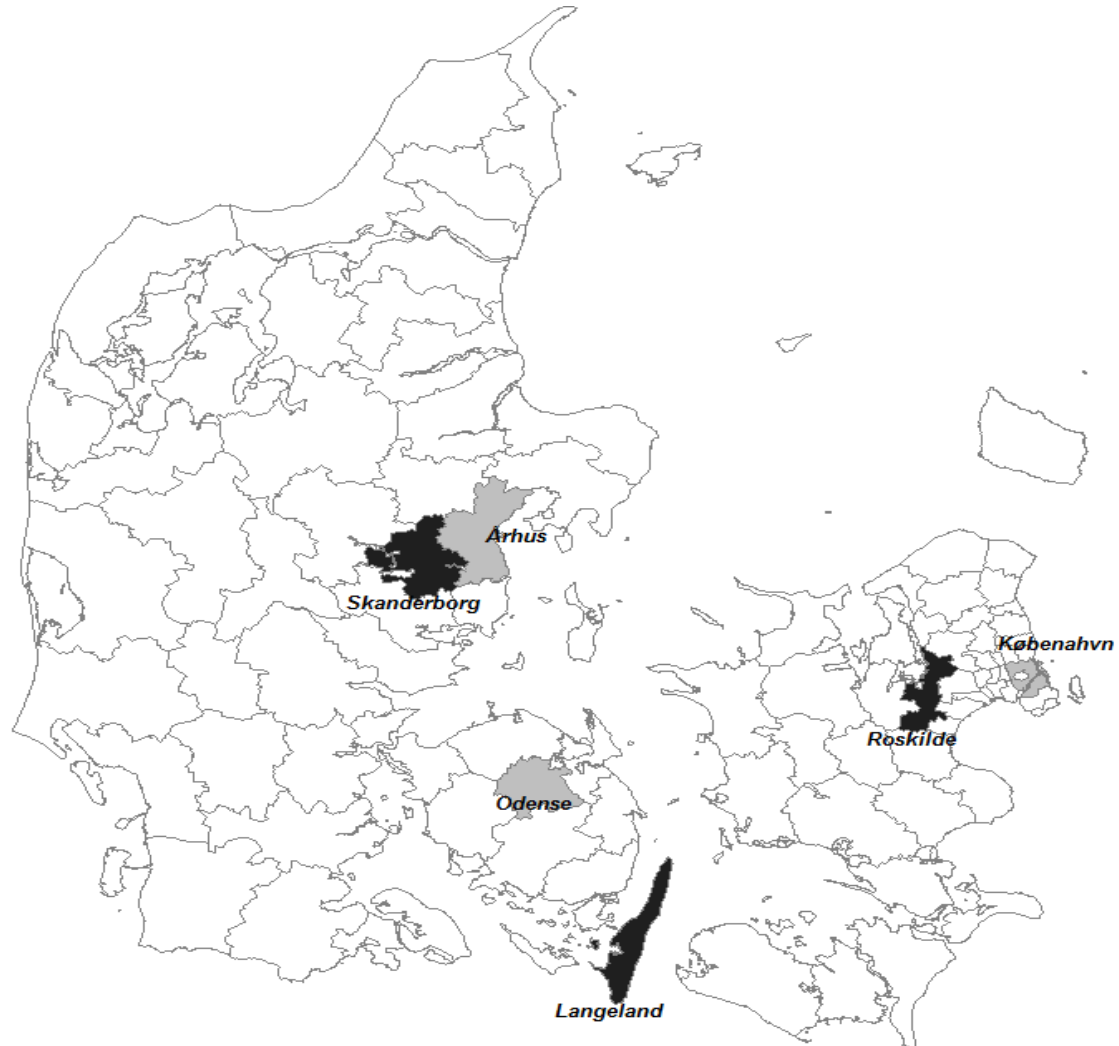
Presentation of three musical festivals in Denmark

- **Roskilde Festival** - the largest festival in northern Europe. It was created in 1971 by two high school students. In 1972, the festival was taken over by the Roskilde Foundation, and now it operated by Association of Roskilde Festival. As a non-profit organization for development and support of music, culture and humanism, It has granted donation and support to different organisations within the social, cultural and sport, as well as regional economical development.
- **Skanderborg festival** - an annual music festival held during the second weekend of August. Its scenic location, in a beech forest in the vicinity of Skanderborg, has given it the name Denmark's Most Beautiful Festival".

Presentation of three musical festivals (continue)

- The first festival was held in 1980 and was a one-day event with 7 bands and about 600 spectators. In 2009, Skanderborg Festival was held for the 30th time and is today the second largest festival in Denmark. The festival gathered more than 45,000 people for the concerts, including 8,500 workers, most of them volunteers.
- **Langeland festival** - known as Denmark's largest garden party, and a family festival. The festival began in 1991 and has over time has grown into one of Denmark's biggest festivals with 30,000 to 35,000 visitors in 2008. It is usually held in the last week of July and typically lasts for four days, although in 2010 it will be held for a full week, from July 24 to July 31.

Location of the three music festivals in Denmark



Population, employment and tourism at the three Municipalities

Municipality	Population	Employment	Total tourists (1000)	Tourism revenue (Mio. Kr.)	Tourists per resident (number)	Tourism revenue per resident(DKr.)
Langeland	12,861	5,277	1,153	550	90	42,765
Roskilde	83,554	40,131	1,244	972	15	11,633
Skanderborg	58,094	24,085	745	510	13	8,779

Data source: Statistics Denmark and the SAM-K database. The data shows for the year 2012.

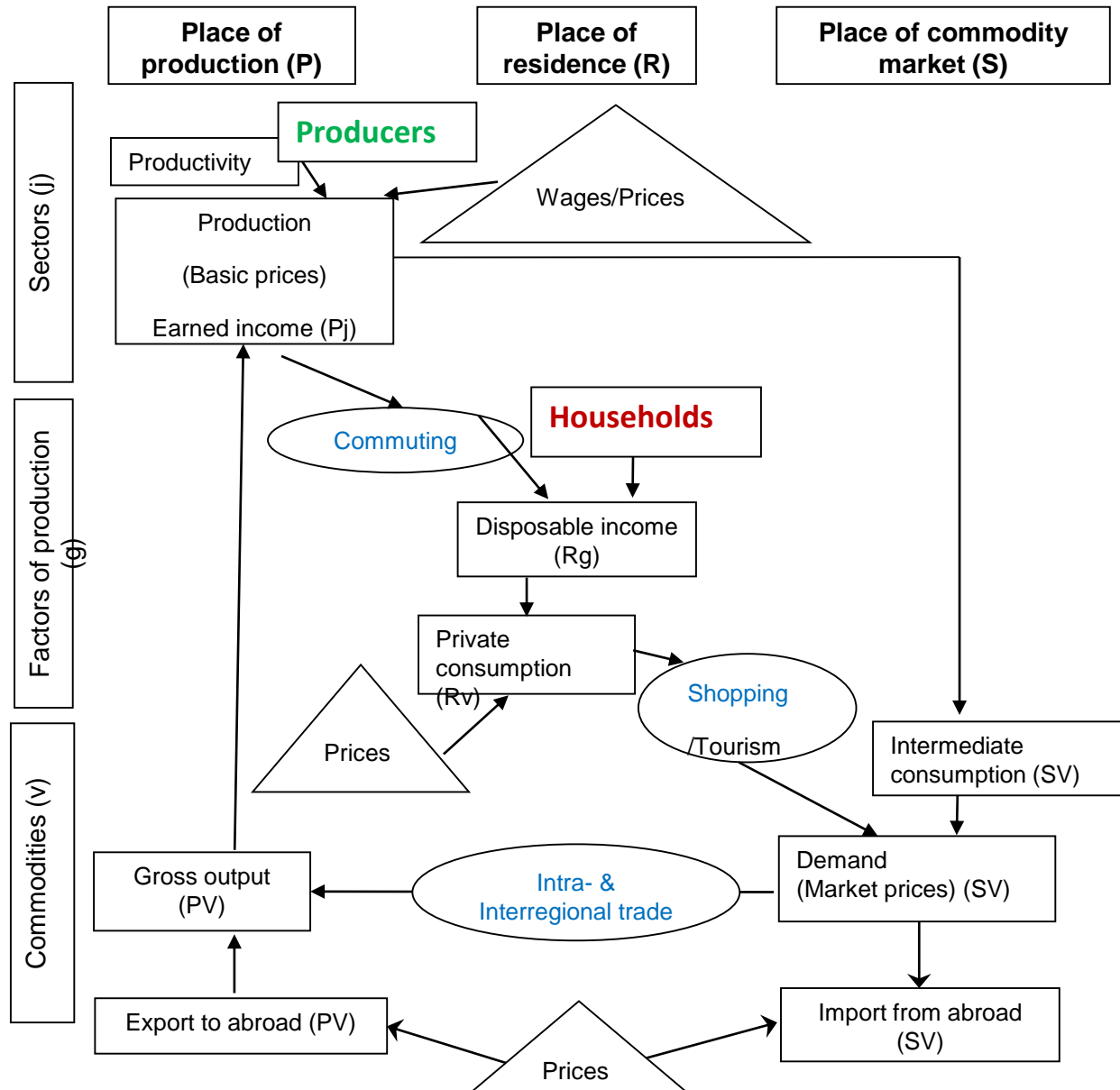
Number of bed nights and tourism revenue at festivals

	Number of tourist nights (1000)	Tourism revenue (million Dkr.)	Average daily consumption per tourist (Dkr.)
Roskilde	387.28	416.97	1076.7
Skanderborg	173.35	182.2	1051.1
Langeland *	100	104.02	1040.2

Data source: Estimated by the number of visitors at festivals and average length of stay.

* The number of tourist nights at Langeland is estimated due to the information that the decreasing number of visitors at Langeland festival.

LINE model – short presentation of model structure



Inter-regional import and export quotients for three festival municipalities

Pct	Roskilde		Langeland		Skanderborg	
Inter-regional:	Import	Export	Import	Export	Import	Export
Festival location region	23.8	17.2	54.1	46.5	56.1	55.1
Capital Region	59.8	73.4	0.8	2.5	1.3	10.5
Rest of Denmark	16	9.4	45	51.0	43	34.4
SUM	100	100	100	100	100	100

In-commuter and commuting quotients for the three festival municipalities

	Roskilde		Langeland		Skanderborg	
	Person	Pct.	Person	Pct.	Person	Pct.
Festival location municipality	18,619	46.2	3,713	81.1	13,227	55.0
Festival location region	11,953	29.6	803	17.5	9,908	41.2
Capital Region	9,124	22.6	27	0.6	154	0.6
Rest of Denmark	630	1.6	37	0.8	761	3.2
SUM	40,326	100	4,580	100	24,050	100

Out-commuter and commuting quotients for the three festival municipalities

	Roskilde		Langeland		Skanderborg	
	Person	Pct.	Person	Pct.	Person	Pct.
Festival location municipality	18,619	45.3	3,713	70.0	13,227	44.8
Festival location region	4,189	10.2	1,357	25.6	14,515	49.1
Capital Region	17,724	43.1	105	2.0	586	2.0
Rest of Denmark	572	1.4	133	2.5	1,222	4.1
SUM	41,104	100	5,308	100	29,550	100

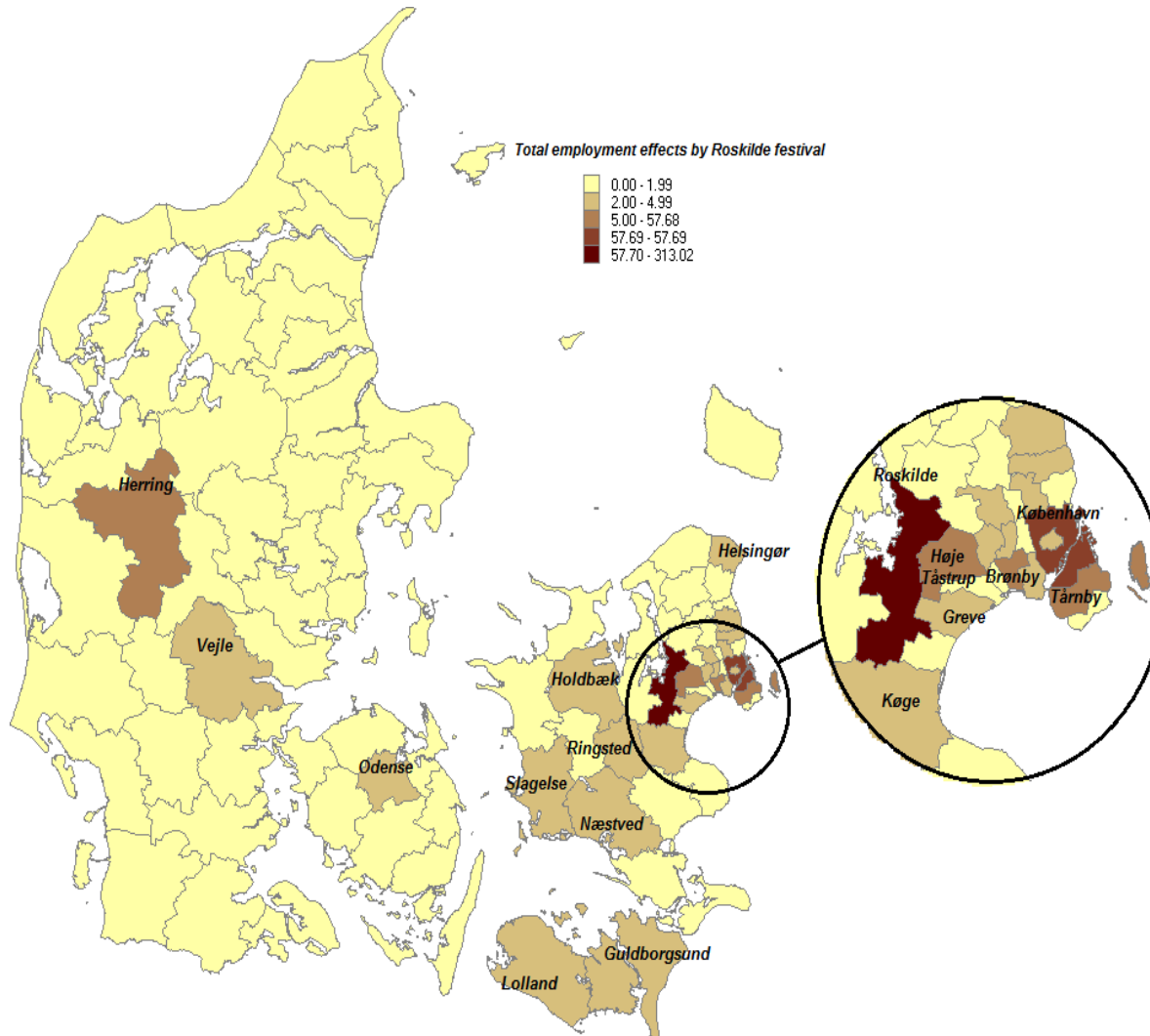
Results from the analysis: employment effects

Number of FTE jobs	Effects	Festival area	Own region	The rest	Copenhagen	Denmark
Roskilde Festival:	Direct:	252	14	54	21	321
	Total:	313	41	155	58	509
	<i>Multiplier</i>	<i>1.24</i>	<i>2.86</i>	<i>2.85</i>	<i>2.74</i>	<i>1.59</i>
Skanderborg Festival:	Direct:	103	29	26	4	158
	Total:	119	60	60	10	239
	<i>Multiplier</i>	<i>1.15</i>	<i>2.05</i>	<i>2.36</i>	<i>2.46</i>	<i>1.52</i>
Langeland Festival:	Direct:	52	9	31	1	92
	Total:	61	23	57	3	141
	<i>Multiplier</i>	<i>1.17</i>	<i>2.48</i>	<i>1.85</i>	<i>2.83</i>	<i>1.53</i>

Regional employment effects by percentage

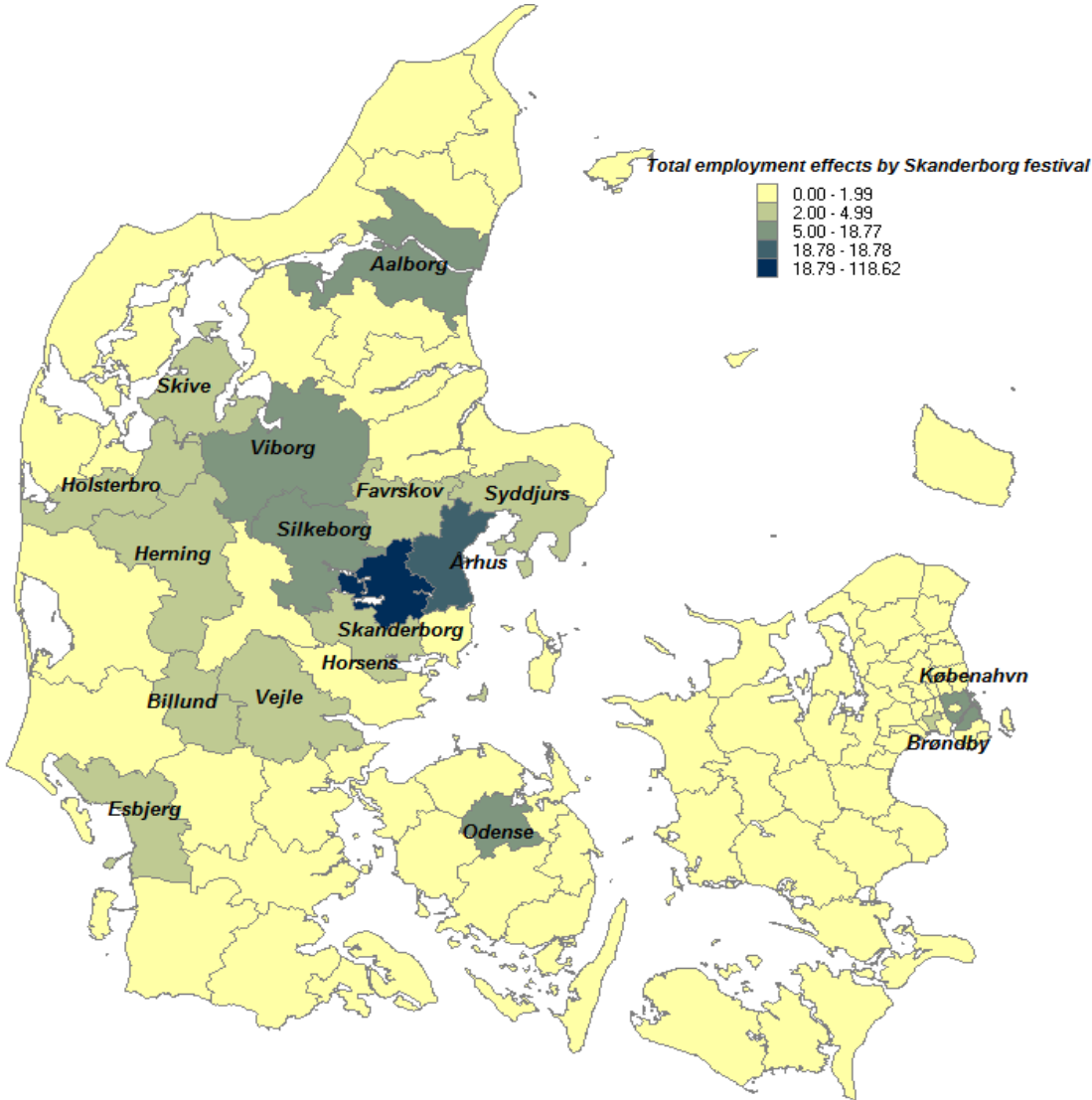
		Festival area	Own region	The rest	Copenhagen	Denmark
(%)						
Roskilde						
Festival	Direct:	78.6	4.5	16.9	6.6	100
	Total:	61.5	8.1	30.4	11.3	100
Skanderborg						
Festival	Direct:	65.2	18.5	16.3	2.6	100
	Total:	49.7	25.0	25.3	4.2	100
Langeland						
Festival	Direct:	56.5	9.9	33.5	1.1	100
	Total:	43.2	16.2	40.6	2.1	100

Total employment effects by Roskilde festival



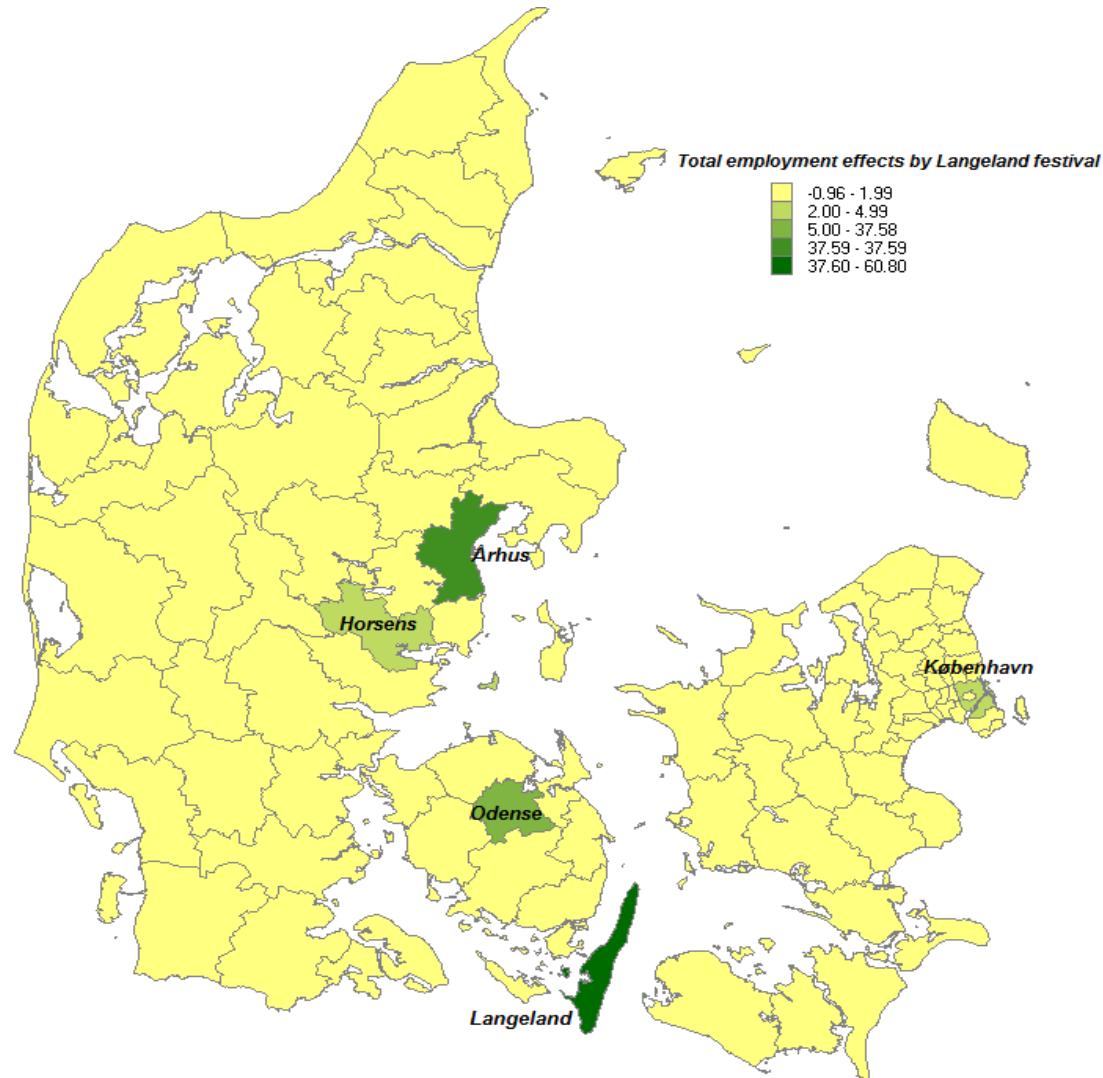
Roskilde	313
København	58
Brøndby	8
Tårnby	8
Herning	7
Ringsted	5
Næstved	5

Total employment effects by Skanderborg festival



Skanderborg	119
Århus	19
København	10
Silkeborg	8
Odense	8
Aalborg	7
Viborg	6
Herning	5

Total employment effects by Langeland festival



Langeland	60.8
Århus	37.59
Odense	7.38
København	2.91
Horsens	2.33

Conclusion and discussion

- The finding from the analysis by case studies show that there are spill-over effects to other regions beside the places where it holds festival.
- Location matters from the results of regional model. Factors influencing the local and regional spill-over effects are: Productivity, economic structure, trade patterns, shopping and commuting relationships with other regions.
- From a regional policy's point of view, it prefers to attract more tourists to rural and peripheral areas due to the facts these regions face a higher unemployment rate and limited productive opportunities for development. The tourism is normally seen as a way for regional development in the rural regions, while in the urban regions there is a more varied production structure, better infrastructure and variety of cultural facilities.

Conclusion and discussion (continue)

- Different events must have different location choice depending on different factors and the aims which should be achieved. Aim and target of events can be scale of audiences, accessibility, lower costs, maximisation of returns, and promotion of national identity, etc. In this case, location choice is favourable for the urban regions such as a large city. If aim of events is to focus on the community building, attracting the local audiences, and more focusing on the repeat visitors to the local area, the rural region could benefit from organising festivals.
- On the other hand, the big events like Olympic and other sport events, on the purpose of attracting a large scale audience and maximisation of commercial effects, the large city can be the best choice.

Thank you!

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