Southern Melbourne RDA – Input to Regional Food Plan

Economic Benefits of 'Creative Food Economies': Evidence, Case Studies and Actions for Southern Melbourne.

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Executive Summary

This review has been conducted as an input to the development of a Regional Food Plan for the Southern Melbourne RDA. It explores the impacts and tactics of a selection of regions that have chosen to actively regenerate their local / regional food systems. Their motivations, actions and results vary, however through incorporations of global-scale issues such as climate change, food security and population growth into their local-level food planning and/or economic development approaches, many cities and regions are generating new jobs and economic sectors.

The review presents:

1. Definitions: of this new approach to food economies, described as 'local food economy' or 'creative food economy';
2. Evidence: A summary of the evidence pertaining to economic impacts of these approaches;
3. Case Studies: An exploration of motivations, actions and impacts in case study areas that have actively regenerated their local food economies, and an assessment of their comparability to Melbourne; and
4. Tools and Approaches: A framework of the type of actions being taken elsewhere and examples of particularly successful initiatives; and
5. Notes / Recommendations: Notes on applicability in the Southern Melbourne Regions and suggested next steps.

A local or regional food economy suggests food that is grown, processed and sold primarily for local or regional markets, contrasting with commodities produced for national and global markets. The term 'creative food economy' is being used to represent the emergence of vibrant sectors of small-to-medium sized food enterprises adaptively catering for rapidly changing consumer preferences and niche markets. In many regions, this segment of the food economy has been the most dynamic and innovative sector of the food economy for the past two decades, 'comprised mainly of specialty, local, ethnic and organic food-processing firms that are thriving in response to consumers' demands for high-quality, local, fresh, ethnic and fusion cuisine' (Blay-Palmer and Donald 2006).

Economic Benefits

There is already impressive evidence of the economic benefits of local and creative food economies, in terms of revenues, job creation, and business development and diversification. This is despite this being an early stage of the phenomenon, with impacts of emerging innovations yet to be seen (e.g. serious focus on reducing carbon emissions, energy costs, wasted food etc). Local food economies in Australia are less mature than those in the USA and Europe, as well as seriously under-researched. The figures below are drawn from results elsewhere and are indicative of the scale and benefits that could be expected from a strategic focus on this sector.

Table 1: Increasing Size of Local Food Economies (USA)

Region	Indicator	Timeframe	No. Years	% Increase
USA	Direct-to-consumer sales	97/98 - 2007	10	54%
USA	No. farms selling some or all produce in local /regional markets	2010 - 2012	2	19%
	Farmers' Markets	2001-2010	9	59%
	No. of farm to school programs	2004/5 - 2007	3	81%

Key findings from a variety of analyses of the economic benefits of local food economies are summarised in Table 2.

Table 2: Economic Benefits of Local Food Economies

Benefit	Findings
Job Creation	[F]ruit and vegetable farms [in the US] selling into local and regional markets employ 13 fulltime workers per $US1 million in revenue earned, for a total of 61,000 jobs in 2008. In comparison, fruit and vegetable farms not engaged in local food sales employed 3 fulltime workers per $US1 million in revenue." [1] Farms under 100 acres provide five times more jobs per acre than those over 500 acres.[2] Employment growth in Toronto's creative food cluster rose from 45,000 in 1999, to 58,000 in 2008 – expected to reach 10% per annum over the next decade.[3] (Contrast with 180,000 jobs lost in the traditional food economy since 1990)
Multiplier Effect	percentage of money spent in local businesses that is retained in the local economy is typically in excess of 50%, compared to around 15-30% of money spent in non-local businesses.[4] spending in smaller independent local food outlets supports three times the number of jobs than at national grocery chains: outlets selling significant to high percentages of local food support on average one job for every £46,000 of annual turnover; by comparison, at three national chains one job is supported per £138,000 to £144,000 of annual turnover[5]
Farm Viability	USA - of the 110,000 farms selling into local and regional markets in 2010, such sales accounted on average for 61% of total sales (for nearly 2/3 of these local sales > 75% of

[1] USDA Economic Research Service, 2011. "Direct and Intermediated Marketing of Local Foods in the United States". November 2011, ERS Report No.128.
[2] http://www.localfutures.org/publications/online-articles/bringing-the-food-economy-home.
[3] Ajayi et al 2010
[4] *See* http://www.ilsr.org/key-studies-walmart-and-bigbox-retail/#1.
[5] CPRE 2012

	total sales Especially important for horticulture: 'nearly 40 percent of all vegetable, fruit and nut farms in the US sell their products in local and regional markets.'[6] Increased prices ranged from 50% for apples to 649% for salad mix Changing the incentive to farm: USA 2002-7, 300,000 new farms had commenced operation, with a net increase of 75,810 farms. Nature of the new farms: smaller, more diversified production, being 'run by younger operators'.[7]
Other Benefits (not *directly* economic)	
Health	[A]s the total per capita dollar volume of direct farm sales increases, both the rate of obesity and diabetes falls. A $100 dollar increase in per capita direct farm sales is associated with 0.8% lower obesity rate and 1.2% lower diabetes rate. The density of farmers' markets is also important. An additional farmers' market per 1000 people is associated with a 0.78% lower diabetes rate…Counties that have at least one farm-to-school program have on average a 1.06% lower obesity rate…[8]

Case Studies

An initial sweep of regional food approaches revealed about a distinct dozen areas of interest. From these, six were identified for closer examination according to the following criteria:

- Focus on economic development;
- Participation and leadership of local and regional levels of government;
- Collaborative, cross-sectoral nature of the models / initiatives; and
- Degree of comparability with the southern Melbourne context.

These criteria narrowed the selection to the six case studies in Table 1. Key features are outlined in Section 3 and more information is contained in Appendix 1.

Table 3: Selected Case Studies

Location	Timeframe	Approach
Toronto (Ontario, Canada)	Since 1990s	Local food economic development
Ann Arbor (Michigan, United States)	1998--present	Food economic localisation and farmland preservation strategies

[6] 'Local Foods Are Working for the Nation' – Nov 2011 - http://blogs.usda.gov/2011/11/08/new-report-local-foods-are-working-for-the-nation/.
[7] USDA, 2009, *News Release No.0036.09,* 4.2.09, available at http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2009/02/0036.xml.
[8] Salois 2010

Woodbury County (Iowa, United States)	2005-present	Incentives for local, organic production for local population by family farmers
Emilia Romagna (Italy)	various phases since 1940s	Highly successful food industry cluster development characterised by co-operative business arrangements, flexible specialisation, strong food traditions and dedicated support from universities and higher education colleagues
Belo Horizonte (Minas Gerais, Brazil)	Since 1990s	World leading food security initiative coordinated by the City government, stimulating local food production by prioritising the sourcing of food from local family farmers
Devon, UK	2011-12	Considerable entrepreneurial skills base within the county's food economy, coping with significant economic downturn

Successful Actions

The diagram below is adapted from the 'Food systems planning' approach, produced for the 'Who Feeds Bristol?' study (Carey 2011). It sets out a number of the different types of key actions and initiatives that together comprise the conditions for a thriving local and creative food economy.

From this overview, a number of areas of action have consistently emerged from the case studies. These are summarised in Table 4 and described in more detail in Section X.

Table 4: Tools and Approaches in the Case Studies

Tool / Approach	Geographical region(s)	Lead actor(s)	Prime motivation(s)
PDR acquisitions / Farmland trusts	Ann Arbor, Michigan, elsewhere in Northeast US	Washtenaw County Council / Ann Arbor City Council	Farmland preservation
Food cluster development / Business Incubators	Toronto / Emilia Romagna	City / regional governments / businesses /	Economic development
Food business partnerships / networks	Michigan, Emilia Romagna, Iowa, Devon	Food businesses / local government	Economic development
Branding / Labelling / Certification	Toronto / Canada / US / Devon / Emilia Romagna	Business partnerships / not-for profits	Economic Development
Education and awareness-raising	All regions	Community groups / health and nutrition professionals / post-secondary colleages & universities / farmers / business partnerships	Health and well-being, economic development, environmental sustainability, equity
Food Policy Councils / Coalitions	Toronto, Ontario, 100 other towns / cities / states across North America / Bristol	Local / State government / community groups / business coalitions / farmers	Food security Farmland preservation Economic development Health and well-being Environmental sustainability
Food Charters / Food Policies	Toronto / Devon / Iowa / Michigan / Belo Horizonte	State / local government / Food Policy Councils	Health and well-being, economic development, environmental sustainability, equity

Some more detailed and specific tools and approaches can be identified / recommended by considering the challenges faced by businesses within creative food economies. Table 5 offers a summary of some of these challenges and opportunities as outlined in other sources.

Table 5: Challenges and Opportunities

Challenges	Opportunities
New food economy SMEs have difficulty in securing capital for business expansion and	Identifying non-traditional funding mechanisms – e.g.co-

growth	operatives, Slow Money / patient capital investment
Lack of recognition of the new sector from government / mainstream players	Map the city or region's food processing sector to raise awareness of the industry and help food businesses establish partnerships and build connections with each other
SMEs lack the ability to represent themselves and advocate for their needs cf large food manufacturers who can lobby **to influence regulations**	Formation of city / province-wide New Food Economy Industry Council (including the selection of an industry champion) to provide a unified and dedicated voice, in order to coordinate marketing, promotion, networking, communication and advocacy efforts, raising the visibility and profile of the sector, and its importance
Lack of integrated food and agricultural policy – i.e. focus continues to be on production of agricultural commodities for export	Use the Food Charters and similar initiatives to press for a 'Minister of Food' at the state / county / provincial level
Regulations around food safety are hampering innovation	Pilot initiatives such as mobile meat inspectors / mobile abattoirs
Disproportionate burden of compliance on SMEs, who don't have the resources to interact with bureaucrats cf larger companies	Highlights the need for an effective new food economy industry council
Lack of coordination amongst policy makers	A national and state / county / provincial food policy which includes the social, health and environmental benefits of food; and which new food SMEs are engaged in the design and implementation
Lack of highly-skilled labour	Work with post-secondary colleges and government to provide more and better education and training for the new food economy workforce; and to spark an interest amongst youth about how food is produced, developing an appreciation for the food sector as well as food job opportunities
Peak-hour traffic congestion	Continue to experiment with alternative distribution networks and logistical coordination, e.g. via greater use of online sales and integrated delivery routes
Lack of coordinated marketing mechanisms that raise brand awareness by eaters, e.g. for organics	Expand initiatives like Local Food Plus labelling and certification systems; work on dedicated local, sustainable branding and marketing campaigns
Lack of research funds to test new products	R & D funding to support the new creative food economy

Sources: Blay-Palmer and Donald 2006, 391-2, Donald 2009, Ajayi *et al* 2010

Next Steps

While all the case studies are worth of further investigation, we recommend that Phase 2 investigates Toronto and Ann Arbor in more detail, given the relatively high coincidence of cultural, economic and political factors with the southern Melbourne context, and in particular the degree of leadership and coordination shown by local government.

The industrial food economy is and will continue to be a key sector in the Southern Melbourne regional economy. However, McKinna et al. 2013 suggests that its strength and vitality is highly variable across the three different local government areas in the region. For example, it would seem that businesses in Mornington Peninsula Shire have already strongly moved to supplement the traditional food economy with a creative and local approach that takes advantage of local conditions and proximity to Melbourne's urban populations. Similarly, Cardinia Shire shows evidence of both – with large players consolidating and expanding both agricultural and down-stream food sector operations, as well as an emergence of new entrepreneurial approaches. The City of Casey offers perhaps the most stark transition opportunity, with the traditional food sector (particularly agriculture) rapidly declining, while the newly arriving urban population has a high proportion of small to medium and home-based businesses. It also has a large proportion of young people – often a key focus in creative food economy job creation.

This paper does not suggest that the emergence of a creative food economy would displace or replace the more traditional agri-food sector. Drawing from evidence of approaches elsewhere, we suggest that careful and strategic cultivation of both can create a diverse and resilient food economy that provides broader benefits to the community, than simply a focus on traditional agri-economies alone. As the case studies demonstrate, there is substantial and increasing evidence that a focus on local and regional food systems can generate significant regional economic benefits – in very diverse geographical, social and economic contexts.

1 The Emergence of a ‘Creative’ Food Economy

1.1 Local and Creative

The concept of a ‘local food economy’ clearly captures food production, and related economic and social activities, that take place in reasonable proximity to where people live. In that sense, there is a strong element of territorial, or place, identification with the produce (Tregear 2007). A local or regional food economy suggests food that is grown, processed and sold primarily for local or regional markets, contrasting with commodities produced for national and global markets. Thus a key distinguishing feature of local and regional food economies are the higher levels of trust and more intimate connection that purchasers have with the producers of food, as epitomised by the interpersonal relationships facilitated in farmers’ markets (Tregear 2007, Kneafsay 2012).

Local food assumed particular prominence with the coining of the term ‘locavore’ on World Environment Day in 2005. While ‘locavore’ generally refers to food sourced ‘within 100 miles’ of where it is produced, ‘local’ or ‘regional’, in the US context, has a statutory definition covering food purchased either within 400 miles of where it is produced, or within the State where it’s produced.[9] This same definition has been adopted by the promoters of the ‘Tassievore’ Eat Local challenge, launched in December 2012. By contrast, the Campaign for the Protection of Rural England, in their project mapping England’s local food webs define local food as food whose main ingredients were ‘grown or produced within 30 miles [50 kms] of where it was bought’: a kind of ‘locavore plus’ definition (CPRE 2010).

The term ‘creative food economy’ is being used to represent the emergence of vibrant sectors of small-to-medium sized food enterprises adaptively catering for rapidly changing consumer preferences and niche markets (Blay-Palmer and Donald 2006, Donald 2009). In many regions, these have been the most dynamic and innovative sector of the food economy for the past two decades, ‘comprised mainly of specialty, local, ethnic and organic food-processing firms that are thriving in response to consumers’ demands for high-quality, local, fresh, ethnic and fusion cuisine’ (Blay-Palmer and Donald 2006). Demand for local and regional foods is especially strong (Ajayi et al 2010), driven in part by the ‘dissociation between traditional large firms and the local consumer base’ (Blay-Palmer and Donald 2006), itself a consequence of a globalised food system that produces ‘food from nowhere’ (Bové and Dufour 2001, 55). These are sometimes contrasted with the more traditional and established players, understood as the ‘industrial food economy’, represented by large multinationals like Campbells Soup, Kraft and Nestlé.

Table 6: From Kraft to Craft

Features	Old ‘Industrial Food’ Economy	New ‘Creative Food’ Economy
Prototypical Company	Kraft	Craft / artisanal cheese
Sources of economic	Economic power is centralised	Economic power is diffused and decentralised from owners or controllers

[9] Food, Conservation and Energy Act (2008).

powers	National / international production, processing and marketing Concentrated farms and control of land, resources and capital	of means of production, to individual, highly creative knowledge-workers and extra-firm institutions Dispersed control of land, resources and capital
Sources of quality and innovation	Quality is a measure of added value in highly-processed environments or incremental innovation in packaging and marketing of existing food products (e.g. 27 different kinds of Oreo cookies)	Quality is a measure of taste, terroir and talent of entrepreneurs making new and innovative products
Enterprises' attitudes towards place	Firm or company located close to traditional production inputs like land and transportation networks. Little relationship between place and product making. Preferences for place are subordinate to traditional company inputs.	Traditional production dimensions important, but place becomes central to quality food making, marketing and consuming.

Source: Donald, 2009

1.2 Consumer is King?

Recent decades have seen a strong shift in control within the food system, with retailers becoming the pre-eminent and dominant actors in both national and global food systems, illustrated in Table 2. The dominance of the major retailers in Australia is well documented (*see* Burch and Lawrence 2005, Burch and Lawrence 2009, Richards et al 2012) and has coincided with - many would say produced - the declining numbers and power of the other three sectors of the food system. As well as increasing control upstream (over farmers, wholesalers etc), the dominance of these two major retailers has also significantly reduced competition and local economic diversity in food retail. This is particularly pronounced in activity centres in new urban areas throughout Southern Melbourne, where the playing field is so uneven that independent food retailers (e.g. greengrocers, butchers, bakeries) are not even trying to get a foothold (Personal Communication, City of Casey strategic planning 2012). This means that new activity centres have Coles or Woolworths as an 'anchor' business, but the surrounding businesses are fast and take-away food with few or no alternative (or locally-owned) sources of fresh produce.

Table 7: Shifting Power in the Food Industry

Period	Farmers	Manufacturer	Wholesaler	Retailers
-1900	**Dominant**	Minor	Major in a few trades	Very minor
1900-1950	Declining	**Dominant**	Major in many trades	Minor
1960-1970	Minor	**Dominant**	**Dominant**	Minor

1980-2000	Very minor	Declining	Rapidly declining	**Dominant**

Source: C. von Schirach-Szmigiel, Unilever Board Member[10]

This is the macro-economic context for the emergence of local food economies: they can be understood as consciously created partnerships between those actors who are presently marginal to and / or disempowered by global and national food systems, farmers in particular, with the emerging purchasing power of the (educated and informed) consumer / eater.

These consumers (and farmers) are demanding alternatives and driving the growth of local and regional food economies that provide ethical, specialty, quality and environmentally sustainable foods. A Eurobarometer survey (2011) of 26,713 EU citizens found that 54% 'totally agree' that 'there are benefits to buying local food' (Kneafsey 2011). Other surveys suggest consumer interest in local foods across the EU may be as high as 80%, but that (as at 2006-7) only about 10-20% of consumers were acting on that interest, with substantial regional variations (e.g. up to 80% of French and Spanish consumers preferring local or regional produce, compared to 8% in Sweden - Tregear 2007).

The figures are trending upwards. A 2010 survey in the UK found that the numbers of shoppers reporting that they had purchased local food in the previous month doubled between 2006 and 2010 (15% and 30% respectively, Hingley et al 2011). The UK Farmers' Markets Association carries out annual surveys, which in 2011 revealed that 1/3rd of UK households shop at farm shops and similarly 1/3rd of households shop at farmers' markets.[11] An Italian study found that more than half the population regularly made purchases through short supply chains.[12] In the US, a National Grocers Association survey (2011) found that 85% of customers 'chose a grocery store in part on whether it stocked regional food', and 1500 chefs ranked local foods as the top industry trend in 2010.[13]

In terms of *consumer motivations*, Hingley et al (2011) cite desire to support local producers and farmers, desire to support local retailers, and desire to keep jobs in the local area, as three major factors, all of which doubled or nearly doubled between 2006 and 2010. This is consistent with recent (unpublished) survey data obtained by The Australia Institute in October 2012. In answer to the question, 'What top two measures should Australia adopt to ensure that sufficient quantities of fresh, healthy and affordable foods are available to all?', 86% nominated 'Support local farmers to produce more', and 63% nominated 'Protect our best farmland from different uses, e.g. mining / housing'. In response to the question, 'How important is it to you that Australian family farmers and small-to-medium sized food businesses are economically viable?', 62% said 'very important', and 30% said 'quite important'. Finally, when asked 'What do you think should be the main two goals of Australia's food system?', 85% nominated 'Promote and support regional / local food production

[10] Reproduced from a presentation delivered by Arie Oskam, chair Agricultural Economics and Rural Policy, *Consumer demand and the food chain: The New Food Economy*, available at: http://www.goglobalnetwork.eu/NR/rdonlyres/672227DE-D207-412D-BF10-766938BFCE14/124740/DROSKAM.pdf.

[11] http://ec.europa.eu/agriculture/events/2012/small-farmers-conference/jackson_en.pdf.

[12] http://europa.eu/rapid/press-release_SPEECH-12-283_en.htm?locale=en.

[13] http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS.

and access to locally produced food', and 43.5% nominated 'Achieve a globally competitive food industry and new export markets'.

2 Economic Benefits

The economic impacts of local and creative food economies, in terms of revenues, job creation, and business development and diversification, have been impressive. In reading the figures below, bear in mind that the emergence of the new local and creative food economies is a very recent phenomenon, and the potential for growth and expansion, having regard to drivers such as carbon pricing and the persistently high price of transport fuels, as well as the rapidly increasing awareness of educated and motivated consumers / eaters, is very significant.

2.1 Scale of Activity

The scope and size of the local food economy in Australia is under-researched compared to the US and the UK. One recent exception concerns a report published by the Australian Bureau of Agricultural and Resource Economics on the *Social and Economic Dimensions of Farmers Markets in Australia* in 2012 (ABARES 2012). The headline figure from this report is that farmers markets and other 'alternative fresh food markets' are estimated to account for 7% of all fresh food sales.

The most impressive data, in terms of size and scale, is from Japan, where direct marketing between consumers and farmers, in the form 'of consumer co-operatives, *sanchoku* groups (direct from the place of production) and *teikei* schemes (tie-up or mutual compromise between consumers and producers)' now total around 1000, with a combined membership of 11 million people and 'an annual turnover exceeding $US15 bn' (Irshad 2010). These groups began to emerge in Japan in the late 1960s and 1970s. In the US, the emergence of a distinct local food sector can be traced to the mid-1990s, and a few years later in the UK.

Available data from a range of sources is summarised in Tables 8-10, outlining the size and growth of these economies in USA, Canada and UK/EU.

Table 8: USA - Size and Growth

Year **Local Food Economic Indicator**	1986	1994	1997 / 8	2001	2004 / 5	2007	2008/9	2010	2012
Total local food sales							$US4.8 bn		
Direct-to-consumer sales			$US557 mn			$US1.2 bn			
Sales of farms marketing local food exclusively through intermediated channels							$US2.7 bn		
Numbers of farms selling some or all of their produce in local / regional markets								110,000 (2.2M farms total)	136,000
Farmers' Markets	340 (1970)	1,755	2,756	2900			5,274	7000	
Community Supported Agriculture Organisations	2			400	1,144, 77,000 members, $36M sales			1,400 (conservative estimate)	
Numbers of farms participating in CSAs						12,549			
Numbers of farm to school programs			2		400	2,095			

Sources: Various reports of the United States Department of Agriculture's Economic Research Service, also O'Hara 2010.

Table 9: Canada - Size and Growth

Year **(Local) Food Economic Indicator**	1986	2000 /1	2004 / 5	2006/ 7	2008/9	2010	2012
Total local food sales, Alberta					$C623 mn		
Food industry sales, Ontario		$C29 bn	$C32.1 bn				
Farmers market sales (130), Ontario				$C645 mn			
Numbers of farmers' markets in Canada	200-250					500	
Total annual sales of Toronto Food Cluster* (food processing / retail / hospitality)							$C17 bn
Annual rate of expansion of Toronto Food Cluster		5%	5%	5%	5%	6%	12% (projected by 2020)
Ontario Food Industry – numbers of businesses					113,395 (59,728 farms, 3,500 processors)		
Ontario Food Industry – number of jobs					726,200		
% of SMEs (less than 50 employees) in Toronto Food Cluster						78%	

Sources: Irshad 2010, Ajayi et al 2010, Donald 2009

* The Toronto Food Cluster includes both local and non-local fresh and processed foods

Table 10: UK/EU - Size and Growth

Year **Local Food Economic Indicator**	1997 / 8	2001 /2	2004 / 5	2008/9	2011/ 12
Local food sales – Northern Ireland / UK		£200 mn – 10% of total retail food sales (NI)			£4.8 bn (UK) (5.7% of total food economy); £2.7 bn for England (CPRE);
Total value of local food networks to local economies					£6.75 bn
Number of weekly customers of local food economies					16.3 million (England, 30.7% of total population of 53 mn)
Total sales of Community Food Sector*, UK					£77mn, total ec value £150 mn**
Numbers of community food sector enterprises, UK					1,030
Numbers of employees and volunteers, CFSEs, UK					1,160 FTEs 27,000 volunteers
Contribution of CFSEs to local producers					£22 - £38mn p/yr
% of EU farms selling more than half					15%, approx. 1.1 mn farms out of 7.3 mn

their produce in local markets					(2007 census)
Numbers of small farms (less than 5 HA) in the EU			10.3 mn		
Numbers of people living on small farms, EU			20 – 30 mn (4-6% of EU population)		
Size of regional food chain, Emilia Romagna (Italy)				82,000 farms, 77,000 FTEs	24,571 firms, 185,993 employees
Increase in exports of food industry, Emilia Romagna				34.3% (2004-8)	5.6%, net food trade balance of $600mn euros
Numbers of farmers' markets, UK	1	200, 5 mn customers, total sales £50 - £78mn p/yr			750, 250 certified by FARMA
Numbers of food co-ops, UK					404
Collaborative Farmers' Markets, UK					212
Community Supported Agriculture Organisations				40	80-300
Numbers of farms participating in farmers' markets, UK					7,500
Number of farm shops					4,000
Numbers of community-owned shops, UK					271

Sources: Dower (2012), Tregear (2007), Stopes et al (2002), Making Local Food Work (2012), Hingley et al 2011, EU Commission Local farming and short supply chains conference (2012), CPRE (2012),Zampagna (2011)

* The Community Food Sector describes five categories of community food enterprises now established in the UK, namely **community shops** (those owned and run by the community through structures such as Industrial and Provident societies), **collaborative farmers' markets** (those owned or controlled by a co-operative of farmers / producers and / or community members), **country markets** (co-operatives of producers of homemade goods), **community-supported agriculture** (structures vary, but the essence is a partnership between farmer(s) and the community for direct food purchases, and **food co-ops** (co-operatively owned bulk-buying community groups).

** The figure of £150mn captures the indirect impact of the community food sector. To put these figures into context, the total size of the UK agriculture, fishing and food economy was £84 bn in 2010 (Gross Value Added), employing 3.7mn people, constituting 9% and 15% of the UK economy as a whole.

2.2 Job creation

Production for local food economies appears to be numerically dominated by smaller-to-medium sized farms, specialising in horticulture and organic / non-chemical production methods. The labor-intensive nature of these operations mean that they create many times more jobs than larger, more capital-intensive farmers:

> [F]ruit and vegetable farms [in the US] selling into local and regional markets employ 13 fulltime workers per $US1 million in revenue earned, for a total of 61,000 jobs in 2008. In comparison, fruit and vegetable farms not engaged in local food sales employed 3 fulltime workers per $US1 million in revenue." [14]

Similarly in the UK, 'farms under 100 acres provide five times more jobs per acre than those over 500 acre.[15] A five-year national study on Mapping Local Food Webs estimated that 103,000 jobs (full and part-time) across England could be attributed to the local food economy, with 61,000 flowing directly from local food sales (CPRE 2012).

In Toronto, employment growth in its food cluster (new creative food economy) has been steady over the past decade, rising from 45,000 in 1999, to 58,000 in 2008 (Ajayi et al 2010). Over the coming decade, employment growth in the cluster as a whole is expected to reach 10% per annum. The expansion of sales is expected to be especially strong in the specialty foods sub-cluster, which is estimated to average 12% growth per annum. This contrasts with the more globally-exposed 'old industrial food economy', which saw the loss of 180,000 jobs in Toronto in the wake of the signing of the 1989 Canada-US Free Trade Agreement, and the deep recession of the early 1990s.

2.3 Multiplier Effect

A further benefit of local food economies (and economic localisation generally), is the *multiplier effect*: that is, the capacity of locally-owned and operated businesses to circulate and return money spent in their operations within the local economy. In the US a series of studies and reviews over several years have documented how the percentage of money spent in local businesses that is retained in the local economy is typically in excess of 50%, compared to around 15-30% of money spent in non-local businesses.[16] The Mapping Local Food Webs study in the UK found that

> [P]ound for pound, spending in smaller independent local food outlets supports three times the number of jobs than at national grocery chains: outlets selling significant to high percentages of local food support on average one job for every £46,000 of annual turnover; by comparison, at three national chains one job is supported per £138,000 to £144,000 of annual turnover.
> CPRE 2012

This multiplier effect is a strong engine of economic development, and is a major reason why the USDA has established dozens of grant programs and other mechanisms to support the growth of local and regional food systems in the US:

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[14] USDA Economic Research Service, 2011. "Direct and Intermediated Marketing of Local Foods in the United States". November 2011, ERS Report No.128.
[15] http://www.localfutures.org/publications/online-articles/bringing-the-food-economy-home.
[16] *See* http://www.ilsr.org/key-studies-walmart-and-bigbox-retail/#1.

In addition to creating new jobs in food production, a strong local food system drives growth in related businesses: equipment manufacturers, processors, cold storage facilities, food hubs, transportation networks, and retailers.17

2.4 Farm viability

Loss of farmers and declining farm viability is a persistent and serious issue across Australia. In December 2012, the WA Farmers Federation reported that 'the number of farmers has dropped by 40 per cent over the past 30 years – on average, 300 people have left the industry every month'. As further evidence of this silent rural economic and demographic crisis, a 'quarter of farmers are aged 65 or over, and the median age of farmers is 53, 13 years more than any other sector.'[18] Many of those exiting the industry are small farmers, who are unable to compete with larger volume operations. However the 'get big or get out' trend also comes at the cost of an increasing debt burden, with average debt levels (to fund land and machinery purchases) doubling over the past two decades.[19] This has led to renewed calls for a new rural bank.[20]

It's a similar story in the UK, where 'farm incomes remain at 1930s levels, having dropped 75% in three years in the 1990s'; and in Canada, where nearly 70 farms per week disappeared in the five-year period from 2001-2006, with average farm incomes falling 'by 24% between 1988 and 2002' (Irshad 2010).

In the US, local food marketing is becoming a mainstay for growing numbers of farms – mainly small farms, but also some larger ones. Of the 110,000 farms selling into local and regional markets in 2010, such sales accounted on average for 61% of total sales. Nearly two-thirds of these farms reported that such sales accounted by 75% of total sales. Local and regional food economies are especially important for horticultural farms: 'nearly 40 percent of all vegetable, fruit and nut farms in the US sell their products in local and regional markets.'[21]

A USDA study comparing margins for local producers selling to local markets, compared to those selling to non-local markets, found that increased prices ranged from 50% for apples to 649% for salad mix. Economic benefits such as these help explain why the downward trend in total farm numbers in the US appears to have halted, and may even be in the process of being reversed, in recent years. The 2007 USDA Agricultural Census reported that in the five year period 2002-7, 300,000 new farms had commenced operation, with a net increase of 75,810 farms. Just as significant as the net increase in farm numbers was the nature of the new farms, being smaller,

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[17] *See* the recently-launched national map of local food systems produced by the USDA, 'Know Your Farmer, Know Your Food Compass', endorsed by President Barack Obama: http://www.usda.gov/wps/portal/usda/usdahome?navid=KYF_COMPASS.

[18] 'Poor returns blamed as farmer numbers fall': 12.12.12, http://www.abc.net.au/news/2012-12-12/poor-returns-blamed-for-declining-farmer-numbers/4423958.

[19] 'Decade of rising farm debt': http://www.kondiningroup.com.au/storyview.asp?storyid=8682575&sectionsource=s1450060, 1.5.12.

[20] 'Farmers call for help to deal with debt crisis': http://www.abc.net.au/pm/content/2012/s3613603.htm, 18.10.12

[21] 'Local Foods Are Working for the Nation' – Nov 2011 - http://blogs.usda.gov/2011/11/08/new-report-local-foods-are-working-for-the-nation/.

having 'more diversified production' and being 'run by younger operators'.[22] All these characteristics are consisent with the growth of the local and new creative food economies.

2.5 Rural economic viability

While the numbers of small farms has increased in recent years, the numbers of mid-sized farms in the US fell by over 100,000 (21% of the total) between 1992-2007. It is these mid-sized commercial farms that play a central role in rural and regional economic development; and in turn it is more localised and regionalised food systems that are increasingly perceived as underpinning the viability of mid-sized farms. According to the USDA, 'Local and regional food economies keep mid-sized farmers viable, which is why [the Department] supports these economies.'[23]

At the same time, the role played by small farms, in terms of both economic resilience and food security, should not be underestimated. In the context of persistent economic recession and austerity in the EU as a whole, and conditions of depression in some member states (e.g. Greece), small farms have been identified as a key factor maintaining a level of resilience in these economies, and thus of rural communities in general. In addition to questions of economic resilience and food security, it is suggested that the typically bio-diverse nature of these farms means that they are more likely to successfully withstand the anticipated impacts of climate change:

> In many rural regions, these farm families are the rural communities : if small farming collapsed, so the rural communities would wither, leading to mass out-migration, abandonment of land and increased pressures of rural migrants upon the cities. Small farms produce significant volumes of food, consumed (within both formal and informal economies) by the farm families themselves, their relatives elsewhere, their neighbours and the wider community. They are the main element in many local economies, and have the potential to offer more jobs and to generate more trade. Very often, they are diversified in their products and are thus resilient to crises or to climate change : they can offer a safety net in harsh times, as is being shown by the current revival in their fortunes within the hard-pressed Greek economy. Small farmers are the managers of land, and can keep it in good [health] for long-term food security. They maintain ecosystems, landscapes and local cultures: the survival of that heritage, which has both local and European significance, depends upon the continuation in modern form of the traditional ways of life which created the heritage. All these benefits are public goods.[24]

In the case of Greece, direct selling of produce by farmers has been credited with helping alleviate extreme poverty and hunger; for example potatoes are being sold at discounts of up to 60% on prices in normal retail channels.[25]

2.6 Economic Modelling

In addition to the studies cited above, a number of economic modeling studies in the US have identified how the expansion of local food economies would generate potentially significant job creation and economic growth benefits:

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[22] USDA, 2009, *News Release No.0036.09,* 4.2.09, available at http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2009/02/0036.xml.
[23] *Ibid.*
[24] Prof M.Dower (Univ of Gloucestershire), Presentation during a European Commission conference on *Local agriculture and short food supply chains*, held in Brussels on 20.4.12, *see* http://ec.europa.eu/agriculture/events/2012/small-farmers-conference/programme_en.pdf for the Conference program.
[25] http://europa.eu/rapid/press-release_SPEECH-12-283_en.htm?locale=en.

> Modest public funding for 100 to 500 otherwise-unsuccessful farmers markets a year could create as many as 13,500 jobs over a five-year period (O'Hara 2011)

A 25% shift in the meeting local food demand in the 16 counties of North-East Ohio (pop: 4mn) from local production could:

- Create 27,664 new jobs, and reduce the unemployment rate by 12.5%
- Increase regional output by $US4.2 billion and state and local revenue by $US126 million (Masi et al 2010)

Similarly, it has been estimated that if 25% of the residents of the Edmonton CMA (pop 1.16 mn as at 2011 census) shifted 40% of their current food purchases to food sourced locally,

> [T]his would mean over $330 mn would be shifted to local foods [resulting in] total local food purchasing of $530 mn. The multiplier effect would bring the economic impact to over $2bn (Irshad 2010)

In the US state of Illinios (pop 12.8 mn), a recent report estimated the potential of the local food system to stimulate new economic activity at $US20 - $US30 bn *per year* (Illinois Local and Organic Food and Farm Task Force 2009). This report, which paved the way for the passage of the Illinois Local Food, Farms and Jobs Act, recommends a series of integrated and mutually-supportive steps that can be taken to support local food economies (*see below*).

2.7 Other benefits

While the focus of this paper is on economic benefits (job creation, farm viability, business development and so on), it is important to note that the food localisation is multi-dimensional and has numerous other benefits, particularly in terms of health and well-being, and the building of social capital. For example, a recent regression analysis of the density of local food economies in the US found that:

> [A]s the total per capita dollar volume of direct farm sales increases, both the rate of obesity and diabetes falls. A $100 dollar increase in per capita direct farm sales is associated with 0.8% lower obesity rate and 1.2% lower diabetes rate. The density of farmers' markets is also important. An additional farmers' market per 1000 people is associated with a 0.78% lower diabetes rate…Counties that have at least one farm-to-school program have on average a 1.06% lower obesity rate…
> Salois 2010

As regards social capital, many farmers marketing their produce through local food channels highlight the seemingly non-economic aspects of these relationships as their most valued. US research with CSA farmers, for example, found that '60% say that the most successful aspect of their operations is the strengthened bonds with food consumers' (Irshad 2010).

For all these reasons governments at all levels are looking for ways to support and finance the expansion of local food economies. In 2011, '54 of 55 US states requested USDA funding for local food system projects through the Specialty Crop Block Grant program'.[26] The USDA 2010 five-year strategic plan has support for local and regional food systems as one of its pillars.

[26] *Ibid.*

Increasingly, local, state and federal / national governments are understanding the economic and other benefits of local food systems, and are beginning to create legislative, administrative and governance structures, and channel resources, to support their rapid growth.

3 Case Studies

The guiding objective has been to identify whether and how successful actions in other regions could be applicable to regional economic development in the South Melbourne RDA area. To do this we have identified diverse approaches, assessed their outcomes, and degree of comparability to Melbourne / the SM RDA area. We have then had a closer look at what they have actually done, including spotlighting selected leading initiatives that could be considered for implementation here via their incorporation in the Regional Food Strategy. We also explore the motivations and drivers of the activities, as in most / all of the case studies, these economic results emerge from a combination of economic, social and environmental factors.

An initial sweep of regional food approaches revealed about a distinct dozen areas of interest. From these, six were identified for closer examination according to the following criteria:

- Focus on economic development;
- Participation and leadership of local and regional levels of government;
- Collaborative, cross-sectoral nature of the models / initiatives; and
- Degree of comparability with the southern Melbourne context.

3.1 Toronto, Ontario, Canada

What: Development of a 'new creative food economy' for jobs, business and food security.

When: 1990s-present

Outcomes: Toronto (and Ontario more generally) is now regarded as one of the three leading continental centres of the 'new creative food economy' in North America (the other two being Chicago and Los Angeles). The food and beverage processing industry cluster in the Greater Toronto Area has expanded at the rate of 5% per annum for the past decade, and this growth rate is expected to reach 10% per annum within the next decade, with even higher growth rates for the specialty food sector (high-end, allergen-free, ethnic / exotic foods). The Toronto Food Cluster has annual sales in excess of $C17 bn (sales for Ontario were $C32.1 bn in 2004).

The Food Cluster in Toronto is dominanted by small-to-medium sized enterprises (less than 100 employees). While there were most declines in the total numbers of small and medium-sized enterprises between 2002-8, the Food Cluster experienced strong and steady employment growth over the same period, of around 5% per annum. This contrasts with high volatility in employment in the motor vehicle sector, traditionally the pre-eminent manufacturing sector in Toronto.

The Toronto Food Cluster also has a strong multiplier effect (estimated at 2.83), generating growth in several industries that service the cluster, including packaging, product design, equipment manufacturing, biotechnology and specialised storage and transportation.

Who: City of Toronto, new creative food economy businesses and entreprenuers, food policy activists, educating citizens of a modern 'consumer city'.

The City of Toronto has consciously pursued an economic development strategy of encouraging the formation of creative economy business clusters, and has integrated this thinking into key economic development documents such as the *Agenda for Prosperity* (2008) and the *Creative City Planning Framework*. There is a recognition that 'economic success depends on geographic concentrations of interconnected companies, suppliers and research infrastructure', and that specifically 'firms in the food sector benefit from their proximity to each other by forming connections, sharing information and networking' (Ajayi *et al* 2010, 26).

Why: The economic development potential of a new food economy began to be realised in the early 1990s, with restructuring in the mainstream food sector as a result of globalisation pressures (1989 US-Canada Free Trade treaty) and deep recession (1989-1991) playing an important role.

The shifting approach to economic development was accompanied by an increasingly organised response to widespread concerns over food security, leading to the establishment of the Toronto Food Policy Council (1991), with commitments to make Toronto a food-secure city, with universal access to food based in human rights (Toronto Food Charter).

Key actions

Action / date	Actor	Observations
Toronto Food Policy Council (1991)	Toronto Board of Health / community food groups	Focus on food security, played an important role in the development of both the Toronto Food Charter and the Toronto Food Strategy. Recently it launched the world's first Youth Food Policy Council
Toronto Food Charter (2000)	Toronto PFC / City of Toronto	Expresses commitment to universal food security and right to food for all; sets tone for leadership on food policy and initiatives from the City of Toronto
Local Food Plus certification and labelling (2005)	Not-for-profit, initial funding from Metcalf Foundation	Connects sustainable producers to local businesses / institutions
Farm Start (2006)	Farmers	'An innovative organisation with an objective to support and encourage a new generation of farmers to develop locally-based, ecologically sound and economically-viable agriculture enterprises' (Donald 2009, 27)
Ontario Market Investment Fund, 2008-ongoing	Provincial Government	$C12 mn fund to 'promote consumer awareness of Ontario-produced foods and to encourage Ontarians to buy locally.' Dozens of local food branding and networking initiatives supported, many success stories
Toronto Food Strategy (2008 – ongoing)	City of Toronto (Board of Health)	Drive transition to a 'health-focused food system', which 'creates local, diverse and green economic development'

Toronto Local Food Procurement Policy (2008 - ongoing)	City of Toronto	City-wide local food sourcing standard and targets (33%, rising to 50%) for 'all City divisions engaged in the purchase of foods for operational needs', e.g. childcare centres, aged-care facilities, supported housing
Toronto Food Business Incubator (2009-ongoing)	City of Toronto (Toronto Economic Development) & Agricultural Adaptation Council (Federal)	The TFBI is a NFP that assists entrepreneurs in establishing and growing food processing companies. It provides advice, expertise and commercial kitchen space to new food entrepreneurs. Its goal: 'supporting entrepreneurship and job creation in the food manufacturing industry'

Relevance / Comparability to Melbourne

Factors	Toronto	Melbourne
Demographics		
Cultural	High – history, recent waves of immigration leading to a dynamic 21st century multicultural city, predominantly English-speaking	
Governance	One super-council for the whole city	31 individual municipalities
Planning context	Greenbelt Protection Act (2005) – Provincial Govt framework devolving implementation to municipalities	Planning law and frameworks (UGB / Green wedges) set and amended at State level

3.2 Ann Arbor, Michigan, United States

What: Local food economic development via greenbelt and farmland preservation measures, food-related business incubator and job training program.

When: 1998-present

Who: City of Ann Arbor, Washtenaw County Council, local landowners, members of the Food System Economic Partnership, hunger relief agencies, community garden and educational agencies, Michigan Farmers Union; financing from the state and federal funds for farmland preservation. The initiatives at the city and county level must be understood in the context of a state-wide (and national) push for local and regional food systems, as reflected in the 'key actions' table.

Outcomes: Combined effect of policies have dramatically slowed rate of farmland loss, from 300 acres per day (1940-1990), to 3 acres per day (1987-2007), together with a slowing in development pressures due to economic recession, and increased viability of farm enterprises.

Ann Arbor's Greenbelt preservation program (part-financed by a 0.5% 'millage' local tax) has protected close to 2000 acres of farmland and open space surrounding the city, and leveraged over $12mn in grants.

Seven farms comprising 1,100 acres have been ear-marked for preservation via the PDR process, and the County Council has $1.6mn in funds raised through its own 0.5 millage (i.e. 50 cents per $1000 of rateable property). Landowners typically offer a 10-15% discount on market value, with the remainder of the funds for the purchase coming from external sources. With the farmer compensated via the PDR, s/he can remain on the farm, then sell it at a much more affordable price to new entrants to farming. There are cases where this has begun to happen.

Why: Loss of farmland due to rising land prices and development pressures; concerns about entrenched and growing long-term unemployment in the context of the GFC; strong citizen desire for more local food.

Key Actions

Action / date	Actor	Observations
Public Act 116 (1974)	Michigan State Assembly	First measure in the US enabling farmland preservation at the state level
Natural Areas Preservation Program (NAPP, 1998); Amendment to NAPP Ordinance (2010)	Washtenaw County Council / Ann Arbor City Council	The NAPP created a dedicated millage (50 cents per $1000 rateable value) to allow the Council to Purchase Development Rights (PDRs) for green space preservation. The 2010 amendment allowed the City to contract for PDRs from landowners, enabling farmland preservation in perpetuity
Food System Economic Partnership (2005)	Councils, Food Businesses, MSU, Slow Food, Michigan Farmers Union & others	Goal: Identify economic development opportunities and implement creative solutions to chronic issues relevant to the food system in south-east Michigan; collaborative, multi-stakeholder partnership, established as NFP.
Zingerman's Community of Businesses (1982-present	Specialty food business cluster	Eight co-branded specialty businesses all located in or around Ann Arbor, focused on 'growing deep' (Shuman et al 2009), focusing on 'education, flavour, tradition and integrity of ingredients'; workforce of 600 and $US36 mn in annual sales (2012)
Homegrown Local Food Summit (2007), Homegrown Festival (2006)	Local food businesses / community groups / County council	The summit was a one-day education and promotional event looking to support the local food economy in Washtenaw County. The Festival attracts thousands of visitors celebrating local cuisine, wines and community.
Michigan Food Policy Council	State Government	Includes heads of several State government departments and various food system stakeholders
'Seeds for Change' (2009)	Washtenaw Council, Zingerman's Community of Businesses, FSEP, Ann Arbor-Ypsilanti Chamber of Commerce, Eastern Michigan University &	Job training & support program for long-term poor and unemployed, includes: - Shared commercial kitchen space / incubator and potentially acreage for food production - Business support for local agri-business entrepreneurs - Job training and placement to low income youth and

	others	chronically unemployed workers - Supportive services to trainees to increase job retention - Agri-business economic development promotion - Health and nutrition promotion
Ann Arbor Greenbelt Advisory Committee Strategic Plan (2009)	City of Ann Arbor, Greenbelt Advisory Committee	Prioritisation of local food production for local sale and consumption in the Strategic Plan
Michigan Good Food Charter (2010)	CS Mott Group for Sustainable Food Systems (MSU), Food Bank Council of Michigan, Michigan Food Policy Council	Sets out a vision for Michigan's food system: 'A thriving economy, equity and sustainability for all of Michigan and its people through a food system rooted in local communities and centered on good food'. Six goals to achieve by 2020, i.e. 1) 20% local food sourcing by Michigan institutions, 2) Michigan farmers can 'profitably' meet 20% of total Michigan food demand and 'be able to pay fair wages to their workers'; 3) new agri-businesses will be generated to meet 20% targets; 4) 80% of all residents (twice current level) to have 'easy access to affordable, fresh, healthy food'; 5) Michigan Nutrition Standards to be met by 100% of school meals; 6) Food literacy classes taught from kindergarten to Yr 12 in all Michigan schools. 25 agenda priorities to reach these goals.
Establishment of local food sufficiency as one of ten key environmental indicators (2010)	City of Ann Arbor	Two main measures – amount of greenbelt land preserved, and diversity of farmers' market vendors, cf clean air and clean water, with 7 and 8 indicators respectively. More needs to be done
Michigan Good Food Summit, 2010, 2012	Michigan Food Policy Council, W W Kellogg Foundation	2010 Summit brought 350 stakeholders together, followed by further summit in 2012
Washtenaw County Food Policy Council (2012)	Washtenaw County Commissioners; 15 member multi-stakeholder roster, including agriculture, nutrition, education, food manufacturers, waste management, planning, economic development,	Goal: support and coordinate activities in the local food system. Activities: recommendations for policy changes, forum for discussion of food issues, encourage coordination among different local food system sectors, launch and support local food programs

	public health	
Ten percent Washtenaw Challenge (2010-ongoing)	Community groups / local food activists	Aim for residents and businesses to source 10% of total county food demand from local farms by 2020.

Relevance / comparability to Melbourne

Factors	Ann Arbor / Michigan	Southern Melbourne
Demographics	Aging farming population, proximity to major urban conurbation (Detroit), high levels of obesity;	Aging farming population, proximity to major urban conurbation, high levels of obesity
Cultural	Medium-high – history, development trajectory, predominantly English-speaking	
Governance	State Government / Municipal / City councils	State Government / 31 individual municipalities
Planning context	Innovative local measures to protect farmland, supported by State and Federal funds; recent increase in development pressures; eroding infrastructure; food deserts	Planning law and frameworks (UGB / Green wedges) set and amended at State level, favouring developers rather than farmland preservation; centralised infrastructure; food deserts

3.3 Woodbury County, Iowa, United States

What: Local government property tax incentives and procurement policy to encourage local organic production, within a context of a state-wide push towards food re-localisation, supported by strong research collaborations with the Iowa State University.

When: 2000-present

Who: Woodbury County Board of Commissioners (local council), Iowa Governor and Legislature, Iowa State University (especially Leopold Centre for Sustainable Agriculture)

Outcomes: Iowa has 3000 farms selling $16.5 mn worth of produce directly marketed to consumers in 2007, an increase of 18% since 2002. More than 225 farmers markets now operate, an increase of 75% over 15 years; and more than 50 CSA farms, with a presence in 90% of counties in the state.

Passage of Local Food and Farm Initiative – purpose is to increase profitability for farmers and the number of jobs in local foods. The program brings together the Iowa Department of Agriculture and Land Stewardship, Iowa State University Extension and Outreach, and ISU's College of Agriculture and Life Sciences.

Leopold Center (ISU) research outcomes in the past decade include:

- New marketing tools for farmers and food businesses
- Business planning workshops
- Food distribution feasibility studies
- Training and education workshops for new / minority farmers
- Economic impact studies for various increased local food production scenarios (Pirog *et al* 2011, 9) – e.g. 2010 six state study of increased production in 28 F & V, yield $882 mn in farm sales, 9,300 jobs and $395 mn in labor income

Why: Mounting evidence of continuing rural decline and loss of farm viability as a consequence of the subsidised production of commodities (corn and soybeans). Farmers were earning less in 2002 than 1969, despite a doubling in productivity levels. 1,148 farm families in Woodbury County produced $154 mn of food per annum (1998-2003), but spent $178 mn per annum to raise it. Coordinated support for local food seen as the 'obvious' and 'commonsense' option to big commodity agriculture. As well as being one of the heartlands of 'big food' (total agriculture exports were $US24.3 bn in 2009), Iowa is also seen as a pioneer in the US in promoting and supporting the expansion of a local (i.e. food produced and consumed in the state) economy. Iowans spend $US8 bn per year on food, but only 14% of it on foods produced within the state.

Key Actions

Action / date	Actor	Observations
Iowa Local Food Taskforce (2000)	Iowa Secretary of Agriculture (Patty Judge)	Established in response to requests from farmers and community leaders for government action to support local food, recommended the creation of a state-wide Food Policy Council

Iowa Food Policy Council (2001-2006)	Iowa Governor, Tom Vilsack	Goal: 'To help increase communication and collaboration on food issues across state agencies, and address challenges that impaired the progress of local food commerce in a variety of market venues.'
Woodbury County Property Tax Break for landowners converting to organic production (2005)	Woodbury Economic Development officer, Rob Marqusee	Wanting to stimulate rural economic development from the ground up.
Iowa Food Systems Council, 2010-present	Not-for-profit, business and community groups	Focused mainly on policy and research. Established an Economic Work Group based on the recommendations in Cultivating Resilience (Tagtow and Roberts 2011)
Cultivating Resilience, Food Systems Blueprint for Iowa, 2011	Iowa Food Systems Council	Goal: To measure the health of Iowa's food system through a report card leading to recommendations for research, programs and policies to ensure a food system that supports healthier Iowans, communities, economies, and the environment. The report card was developed with food system stakeholders and involved 14 indicators, 9 of which were scored as negative.
Iowa Local Food and Farm Initiative (2011)	Iowa State legislature	Goal: 'to increase profitability for farmers and the number of jobs in local food. The program brings together the Iowa Dept of Agriculture and Land Stewardship, Iowa State University Extension and Outreach, and ISU's College of Agriculture and Life Sciences'.

Relevance / comparability to Melbourne

Factors	**Woodbury / Iowa**	**Southern Melbourne**
Demographics	Predominantly rural; declining farm viability / aging farmers; rising levels of obesity	Urban / peri-urban; declining farm viability / aging farmers; rising levels of obesity
Cultural	Medium –similar histories, development trajectory, shared language	
Governance	County government, supportive State government local food initiatives	State Government / 31 individual municipalities State government lukewarm about local food
Planning context		Planning law and frameworks (UGB / Green wedges) set and amended at State level, favouring developers rather than farmland preservation

3.4 Emilia Romagna, Italy

What: Highly successful, decades-long approach to regional economic development based on a network of co-operative and integrated food production and manufacturing clusters, with supportive institutions and governance frameworks, described as 'flexible specialisation' and 'regional innovation networks' (Heidenreich 1996).

The regions' food economy has undergone a period of adjustment from the 1990s, which has seen a decline in the numbers of small firms and a trend towards consolidation (Amin 1998). However, it appears 'to have been able to regenerate its competitive advantage in the face of the challenges of globalisation and the ICT revolution' (Rinaldi 2002). Currently the Emilia Romagna regional food chain has 82,000 farm and 24,571 food companies, with total employment of 255,993 employees.

The region's population is 4.4 mn (2011), with Bologna the largest city (pop 1 mn). Emilia Romagna is the third wealthiest Italian region (GDP per capita) and is one of the richest in Europe.[27]

This food chain covers all major food groups: pasta, meat, fruits and vegetables, sugar, wine, seeds, oils. Significantly it includes traditional, high-value products – Parmesan cheese, parma ham, balsamic vinegars.

When: 1940s-present

Who: Food produces and food processing enterprises, regional government of Emilia Romagna, universities and colleges, some financing from the European Union. The role of government is as facilitator and enabler, helping the start-up and growth of clusters through leveraging EU financing, creating and providing business services, and fostering alliances, networks and clusters. Co-operatives have played a leading role in the rapid growth, and longevity of the region's agro-food industries.

Outcomes: Emilia-Romagna constitutes 15% of Italy's food industry, worth 50 bn euros (3.2% of GDP; Italy's agro-food sector as a whole was worth 203 bn euros in 2003, 15.6% of the country's total GDP). Gross agricultural product from the region is worth $4bn Euros; more than 50% of this production is managed by agricultural co-operatives. Emilia Romagna has more than 4500 producers of organic products (2008). Exports from the region were worth 5.3 bn euros in 2008, led by agricultural machinery, meat, fresh fruit and processed products.

The success and longevity of Emilia Romagna's food clusters is that they represent not simply a concentration of food processing enterprises, but rather that the enterprises cover the complete food system, from on-farm production, to farm and food industry machinery and services, to processing, manufacturing, retail and hospitality. These enterprises have managed to combine both tradition (PDO / PGI products) and innovation. Key elements of success include:

- Extensive networks between small businesses (farms, producers, distributors) leading to a high degree of flexibility

[27] http://epp.eurostat.ec.europa.eu/pls/portal/docs/PAGE/PGP_PRD_CAT_PREREL/PGE_CAT_PREREL_YEAR_2008/PGE_CAT_PREREL_YEAR_2008_MONTH_02/1-12022008-EN-AP.PDF.

- Very high concentration of production of agricultural machinery, and industrial and food product packaging machinery
- Close co-operative relationships between SMEs and large co-operative system
- Large-scale research institutes based in 4 local universities. Co-operation in research among industry, government through integration of small-scale agro-food research institutes

Why / How: First phase (1940s-1970s) – co-operative approach to regional economic development, with an emphasis on the protection of traditional food cultures and industries. The success of the 'Emilian model', as discussed extensively in the literature on regional economic development, is described in the following way by Alberto Rinaldi:

> [S]cholars emphasised the role of the embeddedness of economic tissue in the network of social relationships. The basis of Emilia-Romagna success laid in the way market and non- market forces associated with enlarged families and close-knit communities combined, leading to a special balance between competition and cooperation characteristic of the labour market and the industrial structure. People in the districts shared a cultural homogeneity which lubricated social relations among economic actors, reinforced consensus and group loyalty among both entrepreneurs and employees, ensured the social ostracism of rule-violators, provided a common language to speed innovation and information exchange, and established the basis for trustful behaviour (2002, 3)

During the second phase (1980s-present – the era of globalisation), Emilia Romagna did not abandon its agricultural and manufacturing sectors in favour of a full-scale embrace of the service economy. Globalisation has presented several challenges to the co-operative strategy dominated by small-to-medium sized firms, including a loss of competitiveness and a loss of traditional distribution structure (small neighbourhood shops) with the entry of large retailers. This has brought about a decline, both in the total numbers of firms, and in the numbers of very small firms (less than 10 employees) and co-operatives in particular; as well as a drop in the numbers of employees in manufacturing (570,000 in 1981 compared to 510,586 in 1996; for food, beverages and tobacco the numbers of employees dropped from 83,293 in 1981 to 66,224 in 1996). The competitive pressures forced a process of rationalisation and consolidation, while also creating a simultaneously 'global and local dynamic', as Rinaldi explains:

> [T]he Emilian production systems matured two 'qualitative' significant transformations which had an important influence on the development path of the region: the internationalisation of production and the emergence of new local linkages. Strategies for the extension of the range of products were implemented by firms not only internally, but also through mergers, takeovers or the setting- up of new businesses. As a result…many enterprises and often their networks became simultaneously characterised by both global and local relationships, and this deeply affected their linkages with the territory in which they originated. Territorial and sectoral boundaries of local production systems became not so precise as in the past. In fact, knowledge and quality content of artefacts became an increasingly important competitive factor for the region's production systems. This made them need complementarities, which only in some cases emerged within existing industrial districts, by the development of specialised supply or service providers. When it was not the case, this pushed local firms to establish closer relationships with complementary production systems located outside the region (2002, 8)

Thus the second phase of regional economic development has been characterised from a shift from co-operative relations amongst local and regional networks of small-to-medium sized firms, to a still co-operative-led process, but now involving 'groups' of (at times) more geographically-dispersed firms, and also including large firms as well as small and medium-sized firms. At the same time, Emilian groups were beginning to invest outside Italy and by 1998 had established 245 subsidiaries.

Specifically in the agro-food sector, SMEs continued to play an important role, accounting for 65% of total Italian food exports (Brasili and Fanfani 2008)

Chronology / Key actions

Action / date	Actor	Observations
Rapid industrialisation of predominantly agricultural economy, 1945-1980	Small-medium sized firms, regional government and local governments	The so-called 'Emilian model' of co-operative, cluster-based development, with regions specialising in particular products and groups of firms working together in particular industry sectors and chains
Establishment of industrial parks, 1950s-1960s	Regional and local governments	These parks, which can be seen as forerunners of what are now called 'business incubation centres', were dedicated to the development of small-to-medium sized enterprises
Establishment of 'real service centres', 1970s-1980s	Regional and local governments	Such centres also fall within the modern concepts of 'business incubation' and 'mentoring'. They were non-financial, and included business strategies, organisational development and management, marketing and communications, research, and so on
Promotion of extra and intra-firm institutions, 1960s-1990s	Regional and local governments, businesses and co-operatives	These included artisan and small business associations, credit co-ops, and marketing and buying consortia – they acted 'as surrogates of managerial hierarchies for organising inter-firm governance, working as a kind of collective entrepreneur which promoted co-operation, enforced social norms of fair play and stimulated economic growth' (Rinaldi 2002)
Inter-firm takeovers, mergers and consolidations, 1990s	Firms and business networks	As a response to the competitive pressures of globalisation, a 'grouping phenomenon' emerged driven by 'an increased need for greater coordination among businesses, involving long-term relations, facilitating an ability to diversify, adapt and plan long-term strategic action' (Rinaldi 2002). This included large firms forming part of a group with small and very small firms. Significantly, the process was led by Emilian groups rather than foreign multinationals.
Rise of lead firms, 1990s-2000s	Certain firms in key sectors	These firms 'provided the local production systems with much of their progressive characters, benefiting from extensive external sources of information about changes in markets and technologies that they transmitted to their sub-contractors through relatively well-defined networks…the more structured districts with a higher presence of lead firms were in general those exhibiting the better economic performance' (Rinaldi 2002)
Distant networks and decentralised production, late	Most local production networks	A growing process of outsourcing / offshoring, but 'higher value adding and strategically important activities in the production cycle were often retained locally' (Rinaldi 2002), meaning that the local production systems were not

1990s-2000s		disintegrating
Disappearance of a single 'Emilian model', 2000s	Regional economy	Increased differentiation and complexity among and between production systems, value chains and districts, organisational structures and networks; most dynamic districts characterised by 'hierarchical evolution of local networks' based on a 'great stock of interactive and co-operative knowledge' formation (Rinaldi 2002)
32 Protected Designation of Origin (PDO) & Protected Geographical Indication (PGI) certified products, various dates	Local / National / EU governments	Quality assurance and regional identification scheme; provides strong protection and credibility to producers and processors covered by it

Relevance / Comparability to Melbourne

	Emilia-Romagna	**Southern Melbourne**
Demographics	Pop: 4.4 mn, Bologna largest city pop 1 mn, h	
Cultural	Medium-high – same pressures of globalisation, but E-R has a much more homogenous population and a long tradition of artesanal food culture cf further advanced fast food culture in southern Melbourne	
Governance	13 regional governments, undergoing period of consolidation to 4 in 2014	31 municipalities across the city

3.5 Belo Horizonte, Minas Gerais, Brazil

What: Ground-breaking and highly successful integrated approach to food security. Key concepts:

- Integrate logistics and supply chain of the entire food system
- Tie local producers directly to consumers to reduce prices and increase food sovereignty
- Use government purchases to stimulate local, diversified production and job creation
- Educate the population about food security and good nutrition
- Regulate markets on selected produce to guarantee the right to healthy food to all citizens
- Strategy based on right to food, i.e. governments must allocate resources to fulfil the right, people seen as citizens not consumers, food insecurity is a market failure, requiring government action.

When: 1993-present

Who: City government of Belo Horizonte, in partnership with local farmers, retailers, local university, and community groups. Cost: $10 mn per year, 2% of the city's budget; (10% self-financing).

Outcomes: 75% fewer children under 5 hospitalised for malnutrition; infant mortality rate cut by 60% in 10 years (1995-2005), from 35% to 15%, consumption of fruits and vegetables amongst the city's population has increased. 25% fewer people live in poverty.

40% of the city's 2.5 million residents are benefiting from the program, not just the poor. The program's longevity (lasting through several changes of administration) reveals the soundness of its design and implementation, and its unparalleled success.

Returns to local farmers have improved during a period when farmers nationally saw their incomes fall by 40-50%. 49 conventional farmers' markets, and 7 organic ones, established across the city. 34 'ABC' (affordable food markets) established at different locations across the city.

The food security program has been adopted as a national role model for Brazil, inspiring its Zero Hunger Strategy (2003) and informing the development of its National Food and Nutrition Strategy (2006). It is held up internationally as a world-leading example of addressing chronic food insecurity and persistent poverty, while stimulating local economic development based on local food. A recent assessment concluded as follows:

> According to interviewed experts, the means and methods of delivery are far superior to any other system. The law applies to every stage of the food chain, including research and development of (increasingly organic and also urban) farming technology, credits for family farmers and support of farmers markets, waste disposal, decentralized distribution, feeding and health education programmes, operation of popular restaurants and, recently, financial assistance. The programme also includes a formal evaluation process. In these provisions the principles of governance and human security, participation and access to information, and the protection of natural resources find adequate reflection.'[28]

[28] http://www.futurepolicy.org/3385.html.

Why: High levels of infant mortality, poverty and hunger – 11% in absolute poverty, 38% below the poverty line, 20% of children experiencing hunger.

Key Actions

Actions / date	**Actors**	**Observations**
Adoption of Muncipal Law (1993)	City of Belo Horizonte	Created the Municipal Secretariat of Food Supply (SMAB), advised by a 20-member council involving citizens, labour representatives, retailers and church leaders. The SMAB has a staff in excess of 100, and is sub-divided into three departments: 1) promotion of food consumption and nutrition, 2) administration of food distribution, 3) incentives to basic food production.
Implementation of SMAB strategy (1993-present)	SMAB / City of Belo Horizonte	Key concepts: • Integrate logistics and supply chain of the entire food system • Tie local producers directly to consumers to reduce prices and increase food sovereignty • Use government purchases to stimulate local, diversified agricultural production and job creation • Educate the population about food security and good nutrition • Regulate markets on selected produce to guarantee the right to healthy, high-quality food to all of its citizens[29] Three main lines of action: • Policies aimed at at-risk individuals to increase their access to and consumption of healthy foods – not just emergency food relief • Work with private sector to address food desert issues, including price controls of staples • Increase food production and supply – technical and financial incentives to small producers, creation of direct links between producers and consumers, support for community gardens and urban agriculture
SMAB law 2006	City of Belo Horizonte	Made the SMAB and the 1993 law permanent. The collaborative partnership approach (numerous government departments, the private sector, NGOs, community groups and the University of Minas Gerais) has been key to the longevity of this initiative – surviving several changes of administration. Also the initial local leadership was outstanding (Rocha 2001)

Relevance / comparability to Melbourne

Factors	**Belo Horizonte**	**Southern Melbourne**
Demographics	Pop: 2.5 mn. High levels of hunger / childhood malnutrition	Pop: Food insecurity exists but takes different form (obesity); food deserts are an issue
Cultural	Medium-low – distinct histories, not shared language	

[29] http://www.worldfuturecouncil.org/fileadmin/user_upload/PDF/Future_Policy_Award_brochure.pdf.

Governance	One city-wide government Scope to intervene in the market, i.e. by subsidising / controlling prices	State Government / 31 individual municipalities Scope and desire for market interventions limited
Planning context	Significant scope to locate food outlets, supported by Federal Govt zero hunger commitment	Planning law and frameworks (UGB / Green wedges) set and amended at State level, favouring developers rather than farmland preservation

3.6 Devon, England

What: Devon is a largely rural county in the south-west of England, with a total population of 1.135 mn (2011 census). Like other regions in England and Europe, Devon's primary producers and food businesses have been subjected to competitive pressures of a more globalised agri-food economy in the past two decades. As well as bringing challenges (e.g. a cost-price squeeze), many firms also see opportunities, with rising demand for quality and differentiated products in export markets. Recent initiatives to develop a stronger regional food identity (Devon food brand) are seen by Devon firms as important to be able to take advantage of these opportunities. The majority of firms have weathered recessionary conditions well and retain a positive outlook for future years. The discussion below is based on the first-ever systematic analysis of the region's agro-food economy (Lobley et al 2012).

When: 2011-12

Who: Devon County Council, Devon farms and food firms, Exeter University

Outcomes: Devon's agriculture and food economy has performed strongly even during recent (2008-2011) difficult years. Its agri-food industry (core sectors and related sectors) accounted for 13% of total Gross Value Added (GVA) in 2008, compared to 7.6% for the UK as a whole. In terms of employment, agri-food sectors accounted for 22% of the county's total employment, compared to 15% for the UK as a whole. Agriculture's share of GVA for the county fell from 3.5% in 1995 to under 2% in 2008, reflecting structural pressures of globalisation (cost-price squeeze). Agriculture is dominated by dairy and beef cattle.

Recent surveys indicate a positive or very positive outlook amongst a majority of food processors in the region, with a similar outlook shared by around a third of primary producers (Lobley et al 2012).[30] A research team conducting the first comprehensive assessment of the county's food economy found that:

> Evidence from the interviews and the online survey indicates that Devon's food economy is characterised by positive, forward-looking businesses, which, on the whole, report that they are coping with the recession. There is a considerable entrepreneurial skills base within the county's food economy, which proffers a very positive outlook for the medium term (Lobley et al 2012)

[30] 108 food and farming businesses in Devon participated in this survey, which was complemented with a number of semi-structured interviews.

Artisanal food producers, most of whom were very small companies 'supplying high quality products within the city or specialised rural outlets' and 'trading on personal connections with consumers' were particularly optimistic. Another strongly performing sector were 'farm shops – particularly those which offer a delicatessen-like range of local supplies (i.e. more than what is produced on the immediate farm holding)' (Lobley et al 2012).

Medium-sized food businesses more closely integrated to supermarket supply chains have not done so well during the economic downturn:

> [T]hese businesses have been vulnerable to shifting economic conditions, changes in supermarket supply contracts and were not able to compete with the large scale food manufacturers operating at very small margins, using unskilled labour. As a result, during the past 12 months, a number of food processing businesses have closed resulting in many people being left unemployed (Lobley et al 2012)

Amongst firms surveyed, there was strong interest in increasing sales online (39%), through wholesalers (35%) and through farm shops (18%); but only one respondent expressed a desire to sell more to supermarkets. Of the 108 firms surveyed, '70% sold direct to consumers via their own shop, farmers' markets or fairs'; and nearly half of the firms 'reported that 75% or more of their sales were within Devon'.

The researchers found insufficient data on food processing and distribution to 'adequately measure the value being added to Devon primary food production'; and similarly there was a lack of data on the local food economy 'to allow adequate measurement of its value to Devon households and the Devon food economy as a whole'.

That said, interviewees reported growth in the local food sector with 'new local food shops opening up [and] an increase in high street and farm shop retailers and farm shops broadening their ranges to be more like a full delicatessen [as well as] a growth in online retailing.' Artisanal food production was also perceived to have performed strongly in recent years.

Why: Competitive pressures of globalisation combined with the perceived impacts of the 2008 recession (ongoing) have focused attention on the resilience of Devon's agro-food economy and its potential for job creation and business development. Finding that the sector has performed surprisingly well and that confidence levels remained high, the research team have recommended a strategic and focused approach to the sector's development in coming years.

Key Actions / Events / recommendations

Action / Event/ recommendation	**Actor**	**Observations**
Public support / grants / loans programmes, various types and dates, pre-2008	National / EU governments	Such payments have enabled new businesses to start-up, existing businesses to expand into new premises and increase their production with new equipment, and to create new jobs
GFC 2008 & recession	Farms / SMEs	Farm shops report they have benefited – increase in fuel costs means people shop more at local outlets (e.g. farm shops), rather than drive further to large supermarkets. Food price inflation reported to be less in local shops than in the supermarkets, as local businesses absorb the increased costs of

		production. Sales of organic products reported to have declined
Withdrawal of public support and financing	Local / national government	Difficult conditions, as withdrawal of public support is coupled with reluctance of private institutions to lend
High transport costs	Firms	Distribution identified as a real challenge and potential limiting factor to the expansion of the food sector in Devon – local food distribution network proposed in Okehampton (regional centre)
Devon County Brand	Firms	Developing a strong regional identity seen as a need and an opportunity, currently lack of leadership from local government in this area
Marketing initiatives	Devon County Council / firms	Drawing explicit linkages between tourism and local food; raising the profile of the sector, identifying and supporting Devon 'Food Champions',
South-West Food and Drink , 2002	For-profit company	Provides services and project delivery for businesses to 'add value to the sector, foster innovation and investment, help create new jobs and safeguard existing ones'. Has worked with 3,750 businesses in 120 projects over 6 yers, creating 2000+ new jobs and adding £15 mn in net additional GVA.
Public Sector Procurement Initiative, 2008-9	Northern Devon Healthcare Trust, Devon County Council	Local food procurement strategy recognised by Devon County Council as a key tool to drive regional economic development. Pilot policy developed with the ND Healthcare Trust and SW Food and Drink. Community hospitals currently governed by the NHS procurement system, and the terms of the national catering company (Sodexho) 'do not enable the autonomy of the North Devon team'. There was scope for local sourcing of yoghurts, ice-cream, fresh fish, and fresh veg. An initial networking and information event was held
Local Food Strategy Group, 2010	Community members	Formed following a January 2010 workshop held by Transition Exeter. Seeking to influence policy and practice in more coherent and strategic direction. Food movement exists in Devon but currently fragmented.

Relevance / Comparability to Melbourne

	Devon	**Southern Melbourne**
Demographics	Rural county, dispersed population, though proximate to large urban conurbation (Bristol).	Peri-urban / semi-rural
Cultural	Medium-high – artisanal food tradition, shared language and agricultural history, agri-tourism	
Governance	Single county council	31 municipalities

4 Emerging Themes and Opportunities

The case studies strongly suggest that a creative food economy approach often hits a sweetspot in delivering jobs and business growth, along with improved health and community well-being. Some of the evidence and most of the case studies also indicate that the businesses and regions associated with creative food economies are weathering economic downturns better than more traditional food industries.

4.1 Themes

The key lesson to emerge from this first phase of the research is that local food economies are performing strongly in many different countries and regions, both in terms of their rapid expansion from a low baseline, and in terms of their job creation record. A second key lesson is that there is no 'one size fits all' or simple, single approach to the establishment and support of local food economies. Each region has its own particular historical and cultural context, and its own legal and institutional frameworks.

At the same time, there are certain shared drivers in many places, such as the pressures of globalisation and other structural changes leading to declining farm populations, and increasingly educated and informed consumers stimulating demand for products of local food economies. Thus there are a series of emerging patterns, or themes, found to some extent in most or all of the case studies.

Interconnectedness of local food economies: economic results are arising from diverse and sometimes discrete activities (such as health and nutrition education for children, and the awareness-raising actions of environmental groups and local food activists). These activities stimulate demand for produce from local farmers and food enterprises, driving a virtuous cycle in successful local food economic development, as portrayed below:

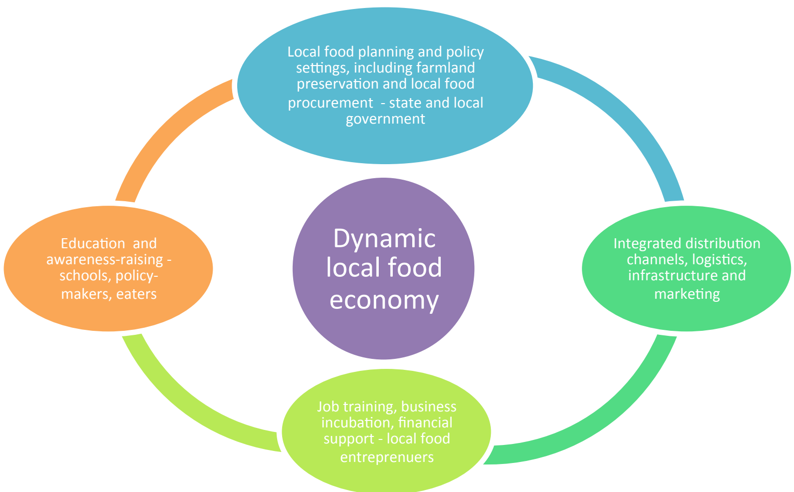


Figure 1: Virtuous Circle of Local Food Economy

Thus an initiative that does not necessarily have economic development as its primary focus, such as the food security project of Belo Horizonte in Brazil, will still have a significant impact on the local food economy, by stimulating demand for its produce. Whether or not it has that impact will depend on the design and implementation of the initiative, and in particular whether a local food procurement policy is embedded within it. Belo Horizonte has that, and much else besides.

The second key emerging theme is the highly *collaborative nature* of successful local food economic initiatives. The thinking that informs this field is very much systemic in character; that is, the local food economy is seen as an integrated system, constituted as a whole by the sum of diverse elements and actors. Accordingly it makes sense, from a governance and economic development perspective, to include as many of those actors as possible in the design, planning and implementation of local food initiatives. We see this approach evident in the Food Policy Councils and similar collaborations in Toronto, Ann Arbor, Iowa and Belo Horizonte.

A third key emerging theme is the primary importance of *education*. This takes two main forms. In the first place, there are the education and awareness-raising efforts of local food activists, environmental campaigners, health professionals and others about the many ethical and environmental reasons to support local food. As the case of Toronto demonstrates, this contributes to a better-educated population, which has generated a substantial and growing demand for the products of the local food farms and enterprises.

Fourth, there is a leading role for post-secondary colleges and universities in providing the research, technical support and training capacity for to enable local food entrepreneurs to develop and maintain the dynamic and innovative nature of their operations, and to supply them with a skilled and capable labour force. Also important here is an extension capacity to support local farmers and growers transition to sustainable and diverse production methods. The case studies of Iowa and Emilia Romagna demonstrate how such research, development, extension and training partnerships contribute to the successful development of local food economies.

As the case studies show, all these barriers can be viewed as opportunities, with many innovative responses being implemented to address them.

4.2 Tools and Approaches

Figure 2 is adapted from the 'Food systems planning' approach, produced for the 'Who Feeds Bristol?' study (Carey 2011). It sets out a number of the different types of key actions and initiatives that together comprise the conditions for a thriving local and creative food economy. There is no 'one size fits all' approach and what actions, and in what form, will depend to a great extent on the local context, and institutional and business capacities currently available.

Figure 2: Action Areas

Drawing from the case studies, we can see a number of these approaches that have been successfully applied in more than one. Table 11 shows some of these tools and approaches and where they have been used. All of these initiatives are potentially relevant to the southern Melbourne context, however we have highlighted (in bold) those we consider as both applicable and potentially actionable in the short-to-medium term.

Table 11: Tools and Approaches

Tool / Approach	Geographical region(s)	Lead actor(s)	Prime motivation(s)
PDR acquisitions / Farmland trusts	Ann Arbor, Michigan, elsewhere in Northeast US	Washtenaw County Council / Ann Arbor City Council	Farmland preservation
Food cluster development / Business Incubators	Toronto / Emilia Romagna	City / regional governments / businesses /	Economic development
Food business partnerships /	Michigan, Emilia	Food businesses / local	Economic development

networks	Romagna, Iowa, Devon	government	
Branding / Labelling / Certification	Toronto / Canada / US / Devon / Emilia Romagna	Business partnerships / not-for profits	Economic Development
Education and awareness-raising	All regions	Community groups / health and nutrition professionals / post-secondary colleages & universities / farmers / business partnerships	Health and well-being, economic development, environmental sustainability, equity
Food Policy Councils / Coalitions	Toronto, Ontario, 100 other towns / cities / states across North America / Bristol	Local / State government / community groups / business coalitions / farmers	Food security Farmland preservation Economic development Health and well-being Environmental sustainability
Food Charters / Food Policies	Toronto / Devon / Iowa / Michigan / Belo Horizonte	State / local government / Food Policy Councils	Health and well-being, economic development, environmental sustainability, equity

Farmland preservation in some form has been identified as a pressing need in the peri-urban growth boundary areas of southern Melbourne. All successful local and regional food economies are founded on adequate amounts of proximate farmland, supported by reliable access to water. Many are consciously adopting and implementing strategies to preserve and protect this land for food production purposes. It is at present unclear what legal, institutional and financing mechanisms may be most relevant and available in the southern Melbourne context to achieve this objective. This is a matter that would require a separate detailed investigation.

Food cluster development is the hallmark of a successful creative food economy. It can be fostered and supported through **business incubation** initiatives, which provide training and mentoring to new start-up companies, as well as low-cost access to premises and equipment, thus reducing barriers to entry and expansion. The following is list of the benefits that Toronto presents to its food industry cluster, most if not all of which also apply to Melbourne:

- Access to a 'vibrant and dense market-base'
- A 'large pool of low-to-medium skilled labour'
- A good transport network for distribution
- Suitable infrastructure for food processing
- Strong and growing consumer demand for the new food economy, including a large and growing immigrant population (Ajayi *et al* 2010)

The process of food cluster development is described in the table below:

Inputs	Facilitators	Outputs I	Outputs II	Outcomes
Cultural sector (creative industry) Primary sector (agriculture) Tertiary sector (service industry)	Environmentally friendly strategy Leadership Stakeholder collaboration Communication and information flows	Food products Other cultural products / experiences (eg food trails)	Development of a food cluster Place marketing and branding	Creative economy development Enhanced attractiveness (place identity and image)

Source: Lee and Walker 2012

Lee and Walker (2012) identify the following as amongst the key factors influencing success in creative food industry cluster formation. Again, many of these factors already existing in the southern and greater Melbourne context; the latter two require conscious design and implementation.

- Degrees of linkages amongst the three sectors – cultural, primary and tertiary
- Attractiveness of setting (Territorial Asset) and its proximity to a substantial urban market
- Generation of food-based cultural products (wines, cheeses, meats, etc.)
- Development of food clusters to complement existing cultural / artistic products
- Facilitation is the key to creation of 'synergistic relationships…the formation of these relationships and the initiatives that result from them constitute the creativity that stimulates the generation of new linkages, ideas and R & D and new products. The result is a new chain of supply and production that must be matched with discerning markets to form a creative food economy.'

Food business partnerships and networks support the growth and development of creative food economy clusters.[31] In the most mature regions, Emilia Romagna especially, these partnerships and networks extend to embrace research collaborations with post-secondary institutions. Zampagna (2011) identifies the following characteristics of the highly successful regional food industry in Emilian Romagna, paying particular attention to the role of agricultural co-operatives in the development of the region's flexible, specialised and diverse food industry clusters:

- Extensive networks between small businesses (farms, producers, distributors) leading to a high degree of flexibility
- Very high concentration of production of agricultural machinery, and industrial and food product packaging machinery
- Close co-operative relationships between SMEs and the larger co-operative system

[31] Characteristics of successful food business networks wil be discussed in the latter section of this paper.

- Large-scale research institutes based in four local universities, facilitating co-operation in research among industry and government through integration of small-scale agro-food research institutes

The universities also support the development of the region's food industry by fostering a skilled and diverse workforce, through degree and masters courses in a wide range of fields including: economics and marketing, food catering, agricultural and food technology, viticulture and enology, international market gardening, nutritional and functional food sciences, land and water conservation, and gastronomy studies (Zampagna 2011).

Further, a new generation of agri-food co-operatives are now emerging, focusing not on commodities but on increasing the value-added elements of their businesses. Some are working towards vertically-integrated supply chains, while others are forming alliances with firms that have 'synergistic expertise' (Zampagna 2011). An outstanding example of the latter is the Mediterranean Fruit Company, an alliance of 27 Italian companies (mainly from Emilia-Romagna) that 'have decided to co-operate to promote their activities [in order to] foster the internationalisation of F & V cluster companies in the Mediterranean'. Activities include fresh F & V production and marketing, packaging, machinery manufacturing and delivery of services. The MFC has offices in Italy, Egypt, Tunisia, Turkey and Russia.

In Michigan, the Food System Economic Partnership is a NFP established in 2005 to:

> [I]dentify economic development opportunities and implement creative solutions to chronic issues relevant to the food system in southeast Michigan. The strength of the FSEP comes from the combined effort of farm organization leaders, food industry heads, community groups, food system and economic development experts, and resource providers.[32]

The FSEP is a collaborative partnership, with membership on its Board of Directors representing two County councils (Jackson and Washtenaw), Michigan State University, Locavorious, Slow Food Huron Valley, Michigan Farmers Union, Legacy Land Conservancy, Gould Farms, and Detroit Food and Fitness.

Branding, labelling and certification serves both an educational role in making consumers aware of the existence of products of the new creative food economy, and helps establish and maintain trust-based relationships which are the hallmark of strongly-performing local food systems. Several local and regional branding initiatives already exist in Australia, such as the King Island dairy produce from Tasmania and the Hawkesbury Harvest label north of Sydney. We are aware that the Bunyip Food Belt logo has been developed as a potential branding initiative for the southern Melbourne region. The Victorian Farmers' Markets Association, with support from the State government, has pioneered a certification process in Melbourne and beyond to validate the authenticity of farmers markets meeting the relevant standards.

In Canada, this sort of initiative has been extended into the wider food retail sector through the creation of Local Food Plus, - a local and sustainable food certification label – in 2005. The label is promoted and supervised by a charitable NFP 'committed to growing local sustainable food

[32] http://fsepmichigan.org/index.php/about/

systems’. Now a national initiative, the label connects sustainable producers to local businesses and institutions. It has certified over 200 farmers and processers; and partnered with 100 retailers, restaurants, caterers, distributors and institutions, as per its website.

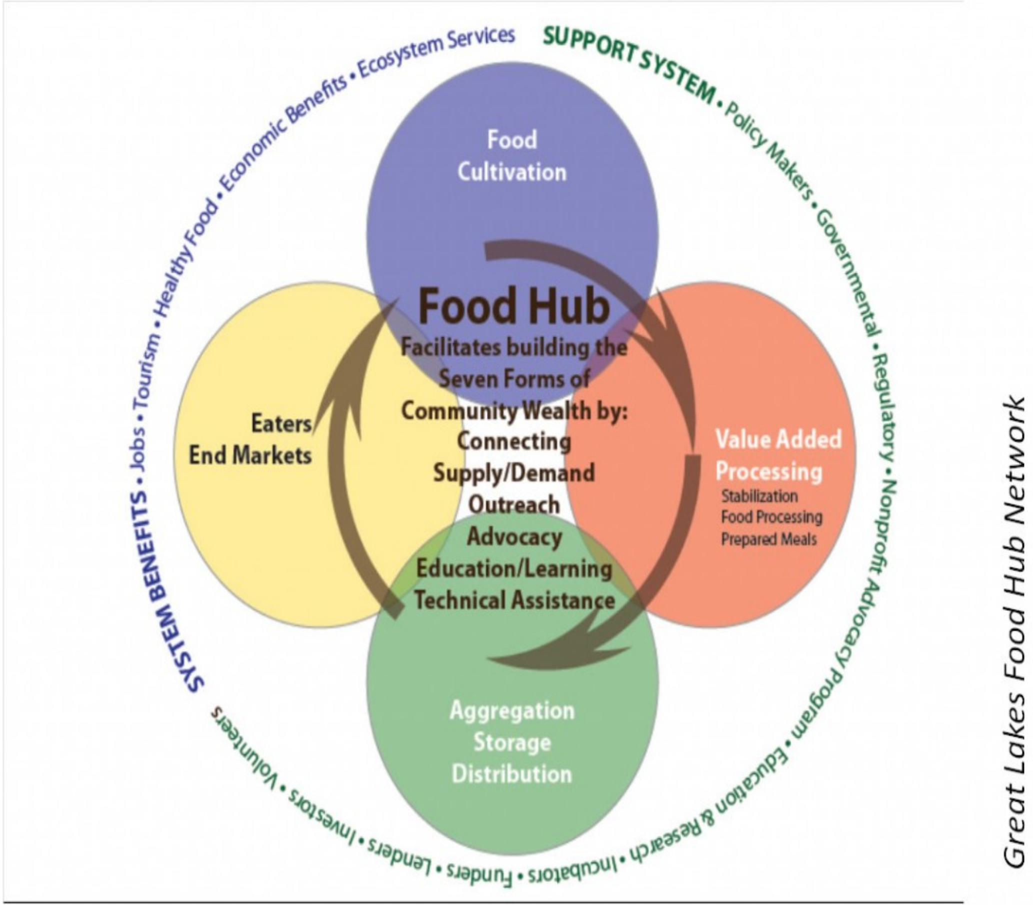
The strong regional food traditions and cuisine of Emilia Romagna are supported by its 32 Protected Designation of Origin and Protected Geographical Indication certified products. These include global households names such as Parmigiano Reggiano, Prosciutto di Parma, and Aceto Balsamico de Modena.

Education and Awareness-raising takes place in diverse ways, but is fundamental to the success and continued growth of the new creative food economy. Quite simply, an education and informed populace are more likely to support the farms and businesses that comprise the new food economy. In this context community food groups and activists have played a leading role in North America and the UK, with (for example) locavore movement credited with playing a leading role in gaining broader acceptance amongst farmers and the general public for farmland preservation initiatives (Morgan 2012).

Similarly, there are educational organisations (both for- and not-for profit) emerging that work directly with children, parents and institutions such as schools and day-care centres to raise awareness of the benefits of healthy eating and of supporting the local food system. In Michigan Agrarian Adventure is one such NFP organisation.

Another (in Toronto) is Real Food for Real Kids, a catering company working with child care centres, lunchclubs and schools, whose mission is to change children’s relationship to food and ‘support local farmers and producers who are committed to responsible and sustainable business practices’ (website). Inititally RFRK had to source local produce through the central market, but it has now reached a sufficient scale where it can purchase produce from the farmers directly. Formed in 2004, the company serves over 8,000 children in daycare centres, schools and YMCAs around Toronto. In 2012, their sales reached $C7.5 million and they employ over 40 staff.

[Add content about Food Hubs, including more specific to Casey?]



4.3 Barriers and Obstacles

Finally, processes of local food economic development face considerable *barriers and obstacles*. First, because of the fragmented nature of the sector and its relative lack of coordination and articulation,]actors within the local food economy struggle to effectively represent their interests to government. This contrasts with the sophisticated and well-resourced lobbying capacities of the mainstream food industry corporations. Secondly, this lack of capacity means that the regulatory environment (for example, regarding food safety inspections and requirements; and planning and zoning decisions) continues to be more favourable to the bigger players. Thirdly, access to start-up capital to finance equipment purchases and staff costs is a barrier faced by many in what is called 'the new creative food economy'. A fourth barrier, particularly pertinent in the southern Melbourne context, is that the ongoing loss of prime farmland limits the capacity of local producers to meet growing demand for local produce. Fifth, in many areas there is a lack of integrated policy-making on the part of government. Sixth, there are key infrastructure and distribution challenges, such as the lack of an aggregating, storage and distibrution service for local food. Lastly, in many places there is a lack of coordinated marketing mechanisms to raise brand awareness of local foods amongst eaters. This is apparent in the relative lack of easily recognisable and trusted labelling and certification schemes promoting local food identification and trust.

Table 12: Challenges and Obstacles to Creative Food SMEs

[NB. To be expanded and adapted to Southern Melbourne context in Phase 2]

Challenges	Opportunities
New food economy SMEs have difficulty in securing capital for business expansion and growth	Identifying non-traditional funding mechanisms – e.g.co-operatives, Slow Money / patient capital investment
Lack of recognition of the new sector from government / mainstream players	Map the city or region's food processing sector to raise awareness of the industry and help food businesses establish partnerships and build connections with each other
SMEs lack the ability to represent themselves and advocate for their needs cf large food manufacturers who can lobby to influence regulations	Formation of city / province-wide New Food Economy Industry Council (including the selection of an industry champion) to provide a unified and dedicated voice, in order to coordinate marketing, promotion, networking, communication and advocacy efforts, raising the visibility and profile of the sector, and its importance
Lack of integrated food and agricultural policy – i.e. focus continues to be on production of agricultural commodities for export	Use the Food Charters and similar initiatives to press for a 'Minister of Food' at the state / county / provincial level
Regulations around food safety are hampering innovation; **Disproportionate burden of compliance on SMEs, who don't have the resources to interact with bureaucrats cf larger companies**	Pilot initiatives such as mobile meat inspectors / mobile abattoirs Highlights the need for an effective new food economy industry council
Lack of coordination amongst policy makers	A national and state / county / provincial food policy which includes the social, health and environmental benefits of food; and which new food SMEs are engaged in the design and implementation
Lack of highly-skilled labour	Work with post-secondary colleges and government to provide more and better education and training for the new food economy workforce; and to spark an interest amongst youth about how food is produced, developing an appreciation for the food sector as well as food job opportunities
Peak-hour traffic congestion	Continue to experiment with alternative distribution networks and logistical coordination, e.g. via greater use of online sales and integrated delivery routes

Lack of coordinated marketing mechanisms that raise brand awareness by eaters, e.g.for organics	Expand initiatives like Local Food Plus labelling and certification systems; work on dedicated local, sustainable branding and marketing campaigns
Lack of research funds to test new products	R & D funding to support the new creative food economy

Sources: Blay-Palmer and Donald 2006, 391-2, Donald 2009, Ajayi *et al* 2010

4.4 The leading role of networks

All the case studies, in one form or another, have highlighted the importance of collaborative relationships and networks. In this final section we look at some of the key features of successful business networks as identified in the literature and by some leading practitioners.

Richard Pirog, currently with the Centre for Sustainable Food Systems at Michigan State University, and formerly with the Leopold Centre for Sustainable Agriculture at Iowa State University, has more than 15 years' experience working with local and regional food systems. He led the establishment of the Iowa Regional Food Systems Working Group, embracing 16 local food groups representing 80 of Iowa's 90 counties. He identifies four key roles that food business networks play, as:

- Information and knowledge hubs
- Catalysts for co-operation – build trust and capacity across organisations
- Magnets – leverage funding to do the work
- Scouts – be at the cutting edge of new ideas and innovation[33]

Pirog offers the following as a typology of food business networks:

Type of Network	Level of risk (to members) Systemic Change Potential	How they operate
Co-operating	Low Little chance	Model best practices; test ideas and learn different approaches; convene problem-solving sessions
Coordinating	Low to Moderate Good chance	Push established organisational boundaries; engage in activities requiring greater mutual reliance
Collaborating	Moderate to High Best chance	Methods in place to resolve conflicts; pursuing long-term system creation; radical shifts from past operation; fundamental resource re-allocation

Source: *From Vandeventer, P., and M Mandell, 2007; Networks that Work*

He also offers five criteria to determine the collective impact of a food business network:

- Common agenda across organisations
- Shared measurement systems

[33] This information comes from a webinar conducted by the National Good Food Network in September 2012: http://ngfn.org/resources/ngfn-cluster-calls/ngfn-cluster-calls#november-29-2012-market.

- Mutually reinforcing activities that create synergy rather than redundancy
- Continuous communication within and across organisations
- Backbone organisations that can plan and manage and support the initiative so it runs smoothly

This last criteria also highlights the need for investment in, and adequate resourcing of, networks, preventing the eventuality of the failure of the initiative.

There are a number of food networks in the US worthy of further investigation, including Value Chain Partnerships, Iowa (www.valuechains.org), Great Lakes Food Hub Network (see image below), and the Michigan Food Hubs Learning and Innovations Network.

Successful networks are built on relations of trust amongst participants. Hence the qualities of collaborating partners are very important.

In the UK, a recent study (Hingley et al 2011) investigated 'the barriers and facilitators for local and regional food network development and the role of governmental and other support agencies'. Three English regional food networks were selected as case studies for comparative purposes: a local food marketing group, a supply chain initiative formed to exploit a local ethnic marketing opportunity; and 'an ethically driven retailer co-operative, sourcing locally'. The findings were as follows:

> Results emphasise the importance of importance of stakeholder engagement and network collaboration, the need for common and agreed direction and strategy, strong and clear marketing image; and the important but confusing role of support organisations in network cohesion. Local food businesses are often small and micro in size and participants are likely to be individualistic, as the nature of niche specialism may decree. This individualism determines a positive approach in some via inventiveness and willingness to engage. However, others may be motivated by caution and feel isolated and disconnected from other network members. Further, success or failure will depend on the level and quality of engagement, strength of network ties and the roles of members, as both champions and network enablers, as gatekeepers with vested interest in the *status quo* or even those blocking integration (Hingley et al 2011)

The role of public organisations and agencies is to facilitate and support network formation and cohesion, with clearly defined roles, since the success of a food business network ultimately requires 'a network lead organisation with a vested interest in market success'.

5 Next Steps and Recommendations

While all the case studies are worth of further investigation, we recommend that Phase 2 investigates Toronto and Ann Arbor in more detail, given the relatively high coincidence of cultural, economic and political factors with the southern Melbourne context, and in particular the degree of leadership and coordination shown by local government.

The industrial food economy is and will continue to be a key sector in the Southern Melbourne regional economy. However, McKinna et al. 2013 suggests that its strength and vitality is highly variable across the three different local government areas in the region. For example, it would seem that businesses in Mornington Peninsula Shire have already strongly moved to supplement the traditional food economy with a creative and local approach that takes advantage of local conditions and proximity to Melbourne's urban populations. Similarly, Cardinia Shire shows evidence of both – with large players consolidating and expanding both agricultural and down-stream food sector operations, as well as an emergence of new entrepreneurial approaches. The City of Casey offers perhaps the most stark transition opportunity, with the traditional food sector (particularly agriculture) rapidly declining, while the newly arriving urban population has a high proportion of small to medium and home-based businesses. It also has a large proportion of young people – often a key focus in creative food economy job creation.

This paper does not suggest that the emergence of a creative food economy would displace or replace the more traditional agri-food sector. Drawing from evidence of approaches elsewhere, we suggest that careful and strategic cultivation of both can create a diverse and resilient food economy that provides broader benefits to the community, than simply a focus on traditional agri-economies alone. As the case studies demonstrate, there is substantial and increasing evidence that a focus on local and regional food systems can generate significant regional economic benefits – in very diverse geographical, social and economic contexts.

6 References

ABARES 2012, *Social and Economic Dimensions of Farmers Markets in Australia*

Ajayi, J., Denson, C., Heath, B., and Wilmot, K., 2010. *2010 Toronto Food Sector Update*. University of Toronto / City of Toronto Economic Development & Culture, Toronto, Ontario.

Amin, A., 1998, 'The Emilian Model: Institutional Challenges', *Quaderni del Dipartimento di economia istituzioni, territorio*, 18.

Blay-Palmer, A., and Donald, B., 2006, 'A Tale of Three Tomatoes: The New Food Economy in Toronto, Canada'. *Economic Geography* 82(4), 383-399.

Brasili, C., and Fanfani, R., 'The Agrifood districts in the New Millennium',

Burch, D., and Lawrence, G., 2005, 'Supermarket Own Brands, Supply Chains and the Transformation of the Agri-Food System', *International Journal of the Sociology of Agriculture*, 13(1), 1-18.

Burch, G., and Lawrence, D., 2009, 'Towards a Third Food Regime: Behind the Transformation', *Agriculture and Human Values*, 26, 267-279.

Campaign to Protect Rural England, *From field to fork: The value of England's local food webs*, CPRE.

Carey, J., 2011. *Who Feeds Bristol? Towards a resilient food plan*, Bristol Green Capital. Available at: http://www.bristol.gov.uk/page/food-bristol.

Donald, B., 2009. 'From Kraft to Craft: innovation and creativity in Ontario's Food Economy', Working Paper Series, Martin Prosperity Institute, February 2009.

Heidenreich, M., 1996, 'Beyond flexible specialisation: the rearrangement of regional production orders in Emilia-Romagna and Baden-Wurttemberg', *European Planning Studies* 4, 401-419.

Hingley, M., Boone, J., and Lindgreen, A., 2011, 'Development of Local and Regional Food Networks: Cases from the UK', Competitive paper, Special track on cluster initiatives, networks and regional development, available at: http://impgroup.org/uploads/papers/7478.pdf.

Illinois Local and Organic Food and Farm Task Force 2009, *Local Food, Farms & Jobs: Growing the Illinois Economy: A report to the Illinois General Assembly*.

Irshad, H., 2010, *Local Food – A Rural Opportunity*. Government of Alberta: Agriculture and Rural Development, available at: http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/csi13484/$FILE/Local-Food-A-Rural-Opp.pdf.

Kneafsey, M., 2012. 'Insights from Research Project: Short Food Supply Chains and Local Food Systems in the EU: A state of play of their socio-economic characteristics'. Available at: http://ec.europa.eu/agriculture/events/2012/small-farmers-conference/kneafsey_en.pdf.

Lee, A., and Wall, G., 2012. 'Food Clusters: Towards a Creative Rural Economy', Working Paper Series, Martin Prosperity Institute, May 2012.

Lobley, M., Thomson, J.T., and Barr, D., *A Review of Devon's Food Economy*, University of Exeter, Centre for Rural Policy Research, June 2012.

O'Hara, J.K., 2011. Market Forces: Creating Jobs Through Public Investment in Local and Regional Food Systems. UCS, August 2011.

Making Local Food Work, 2012, 'The value of the Community Food Sector: An economic baseline of Community Food Enterprises'.

Masi, B., Schaller, L., and Shuman, M., 2010. *The 25% Shift: The Benefits of Food Localization for Northeast Ohio and How to Realize Them*. Available at: http://www.neofoodweb.org/home.

Richards, C., Lawrence, G., Loong, M., and Burch, D., 2012, 'A toothless chihuahua? The Australian Competition and Consumer Commission, neoliberalism and supermarket power in Australia', *Rural Society* 21(3), 250-263.

Rinaldi,A., 2002, 'The Emilian Model Revisited: Twenty Years After', *Materiali di discussione del Dipartimento di Economia politica*, n 417, Modena, Sept 2002, available at: http://notizie.unimo.it/campusfile/file/ECO_DEP/file3012.pdf.

Rocha, C., 2001.Urban Food Security Policy: The Case of Belo Horizonte, Brazil, *Journal for the Study of Food and Society*5(1), 36-47.

Shuman, M., Barron, A., and Wasserman, W., 2009, *Community Food Enterprise: Local Success in a Global Marketplace*, Wallace Centre at Winrock International, Arlington VA.

Salois, M.J., 2010. 'Obesity an d Diabetes, the Built Environment, and the 'Local' Food Economy', unpublished research paper, University of Reading, available at http://mpra.ub.uni-muenchen.de/28288/1/EHB_revised_manuscript_11-01-11.pdf.

Stopes, C., Couzens, C., Redman, S., and Watson, S., 2002, 'Local food: The case for re-localising Northern Ireland's food economy', Friends of the Earth Northern Ireland, Belfast, available at: http://www.foe.co.uk/resource/reports/localising_food_economy_ni.pdf.

Tagtow, A.M., and Roberts, S.L., 2011. *Cultivating Resilience: A Food System Blueprint that Advances the Health of Iowans, Farms and Communities*. Iowa Food Systems Council.

Toronto Board of Health, 2010. *Cultivating Food Connections: Toward a Healthy and Sustainable Food System for Toronto*. City of Toronto, May 2010.

Tregear, A., 2007, 'Proximity and typicity: a typology of local food identies in the marketplace', *Anthropology of Food*, S2, available at: http://aof.revues.org/438.

Zampagna, A., 2011. Agro-food cluster development: the experience of Emilia-Romagna, Adriatic Danubian Clustering, Dubrovnik, 19.4.11, presentation).