Industrial clusters, local labour markets and innovation: A case study of an 'unglamorous' industry

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Abstract: This paper is concerned with a common question for economic geographers - why do similar industries cluster together? Since the 1970s, this enquiry gained impetus as a result of 'declining regions' and the contrasting success of a handful of 'glamour' regions. A common characteristic of these 'new economic spaces' was intense interaction between local firms and institutions, with a strong element of 'untraded interdependency', particularly in the form of knowledge exchange and innovation. In the cut-throat world of the global economy, it was argued that these characteristics would lead to competitive advantage. I examine the key propositions of this approach in an Australian context and argue they are unconvincing. I then turn to an alternative approach and suggest that in an age of 'ubiquities', only labour remains embedded locally. Is labour then, the bedrock of industrial clusters? I develop this idea by revisiting regulation theory – and a case study of an 'unglamorous' but resilient manufacturing sector in Melbourne's north.

Introduction

The key questions behind this paper are common ones for economic geographers – why do industries cluster together geographically and what makes for successful industrial clusters? I begin by outlining the position that geographical proximity of firms and other agents engender interaction; this in turn creates innovation and knowledge. These 'naturally' occurring relationships are said to culminate in competitive advantage, the holy grail of regional economic development. However, this position will be shown as a theoretically and empirically weak explanation for the existence and ongoing viability of industrial clusters. This section of the paper culminates in an alternative explanation: in this world of 'ubiquities', only people, it seems, are more likely than not to be truly embedded in place. The local labour market emerges as the one factor of production for which a 'spatial fix' seems viable, in the longer term. I ask whether it is to labour that we should be directing our attention as an explanation for industrial clusters, their success, or their failure. I then consider how to advance this explanation. In so doing I revisit regulation theory, in particular, recent attempts to apply it at the regional level. A case study to operationalise the 'local process of labour regulation' is introduced, and preliminary findings elaborated. The final section anticipates the policy implications.

Localised learning and innovation

The story of regional development since the 1970s has a decidedly two-edged character. On the one hand we have the problem of 'declining regions'. The 'logic' behind the decline of particular regions is their past reliance on manufacturing, which for a number of reasons saw widespread restructuring or outright closures. However the same period saw the emergence of a handful of 'glamour' regions (Scott, 1988). Well-known examples include Silicon Valley in California (Saxenian, 1994) and the 'Third Italy' region in Europe (Russo, 1985). These models attracted great attention as a 'revival' strategy, or indeed a 'survival' strategy in an increasingly globalised and competitive economic environment (Amin and Thrift, 1992).

The key to their apparent success is their internal dynamic. In spite of the broad geographical spread of trade, finance, services and production engendered by improved transport, communications and deregulation, these regions create jobs and new products while simultaneously maintaining localised trade and service networks. Moreover, they exhibit a high rate of 'untraded interdependencies', meaning that interaction between local firms is social as well as economic (Storper and Scott, 1995). Exchange and generation of ideas occur 'free of charge', and it is this innovative milieu which is said to drive innovation and in turn, the viability of regions (Camagni, 1995). Hence, successful regions are said to prosper in an *institutional* setting (Coulson and Ferrario, forthcoming). This refers not only to the untraded interdependency of a wide range of services and actors which we might strictly understand as 'brick and mortar' institutions - educational institutions, credit agencies, trade unions, business clubs; it refers also to an almost ethereal atmosphere of norms, values, expectations or 'local buzz' (Bathelt et.al, 2004). A related concept is that of *knowledge spillover*, where for example, firms in a local area benefit from new patents established through local private or public research entities (Jaffe et.al. 1993).

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A further dimension to these exchanges is their tacit quality: a subtle form of knowledge generation and sharing, relying upon comprehension of technical jargon and other nuances by a privileged 'in group' (Gertler, 2003). Because such exchanges are literally 'out of contract', a large investment in trust is required (Boschma, 2005). Breach of trust - for example by not fulfilling uncontracted obligations - would be well known in the local area and the perpetrators marginalised (Maskell, 2001).

A further development again of this line of reasoning is that local competition, as well as cooperation, is an essential ingredient for a successful cluster of industries (Porter, 1990, 2000). Firms constituting the *vertical dimension* of an industry cluster – suppliers and repairers of machinery, for example – learn through natural collaboration. Typically they are not in competition with each other. Firms constituting the *horizontal dimension* – firms of the same sub-sector - compete with each other, but learn by example (Maskell, 2001). This particular line of reasoning has been influential with policy makers both internationally (McDonald et.al, 2007) and in Australia (Roberts and Enright, 2004).

The archetypal structural arrangement which feeds the atmosphere of innovation is flexible specialisation (Scott and Storper, 1992). In essence, flexible specialisation is the vertical and horizontal disintegration of economic activities. In this sense it is said to contrast with the integrated production functions of large scale assembly plants, said to be the signature of the 'Fordist' era. The 'logic' underlying the development of flexible specialisation is the need to save costs, by eliminating 'idle' services and labour. This is of central importance as markets become not only more competitive, but more niche and fickle, requiring 'just in time' production and delivery (Sabel, 1994; Gordon and McCann, 2000). Stockpiles of produce or 'stockpiles' of labour can no longer be afforded. Both skilled labour ('contract labour') and unskilled labour ('precarious labour') are either shared by a number of firms within a local area or else simply experience periods of intermittent employment.

Theoretical issues

There are a number of theoretical concerns that arise in evaluating the learning regions approach. These centre on doubts that policies inspired by the approach have or are capable of spreading development evenly – which is of course the prime motivating factor in the renewed interest in models of regional development. For example, development *in* a region, of a key industry for example, does not always translate into development *of* region where the rising tide truly lifts all boats (Lovering, 1999). Another salient criticism is that a 'regional development' agenda lends itself too easily to a particular *political* agenda, namely neo-liberalism (McGuirk and O'Neill, 2003). This criticism views central government as abrogating its responsibility for providing services and maintaining redistributive mechanisms, resulting in control of local resources by 'growth coalitions' of local businesses.

Another important theoretical weakness is the treatment of labour markets. Given the concern with finding evidence of knowledge generation and exchange in industrial clusters, it is not surprising that for much of the time, the approach is concerned exclusively with local pools of *skilled* workers and more generally, 'culturally similar people' (Capello and Faggian, 2005, p. 78). The world of learning regions would seem, on the whole, to be a world where access is restricted to a privileged 'in crowd' (Lovering, 1999). Paradoxically, as only one characteristic of the labour force is of central interest (skilled labour), other important factors that impact on access, for example, ethnicity, gender and age, are of little interest (Hadjimichalis, 2007). In fact the 'collectivist' language in which these analyses are couched, 'epistemic communities' 'relational capital' 'innovative milieu' and the like is both contradictory and misleading.

Relatedly, in interpreting local labour markets only in terms of those who work locally without due focus on those who both work *and* live locally, an opportunity is missed to consider the influence of their operation in terms of the availability of local facilities such as child care centres, education and training institutions, public transport standards, employment schemes, immigrant support services and low cost housing.

Furthermore, as the 'gaze' of the 'learning region' scholars scans the horizon for evidence of localised learning and takes for granted that *learning regions are successful regions,* other explanations for clustering, and other explanations for sustainable industrial clusters are not given their due.

Empirical evidence

For a theoretical construct to lead to a viable policy direction, a strong body of evidence which supports the central arguments of that construct should be available. The central argument of the 'learning region' approach is that successful industrial clusters are characterised by interfirm linkages, knowledge generation and knowledge spillovers. I would like here to concentrate on recent work on industrial clusters in Australia, which have been on sectors which are generally regarded as successful industries.

Roberts and Enright (2004) provide brief case studies of the Australian wine industry,[2] advanced electronics and multimedia in northern Adelaide, the tourism sector in Far North Queensland and a variety of industries in the Hunter Valley in New South Wales. Although examples are cited of collaboration and learning, these are not in-depth studies and with the exception of the north Adelaide study stand outside the major metropolitan regions.

More in-depth studies of major urban areas in Australia surveying firms on locational decisions and collaboration, do not provide convincing evidence for the existence of clusters with 'learning regions' characteristics. Freestone (1996) surveyed 66 enterprises from a range of sectors in North Ryde, northern Sydney, although this area had been marketed as a 'siliconised technolopole', he found that '…in contrast to the 'hype' and the look of the place, the (area)…is no agglomeration of closely-interlinked companies nor recognised seedbed of technological innovation' (Freestone, 1996, p.27). Mohannak and Turpin (2002) discuss findings from a survey of 48 information technology and telecommunications firms in Melbourne. They conclude that '…co-location did not, in any straightforward way, appear to translate into collaboration. This suggests that these firms do not appear to operate, as what might be described as, a typical innovation "cluster" ' (Mohannak and Turpin, 2002, p.170).

Searle and De Valence (2005) surveyed 60 multi-media and graphic design firms in Sydney. In this case the pattern is ambiguous: '…Sydney multimedia and graphic design firms …gain an important share of business from clients in the rest of Australia or overseas' (Searle and De Valence, 2005, p. 248); one-third of contractors and sub-contractors used were located outside of Sydney altogether with a large segment of these providing services on line; two-thirds of firms used 'in-house inputs' rather than other firms. Finally, McDougall and O'Connor (2005) surveyed 22 machinery and manufacturing equipment firms in south east Melbourne. Using the criteria of 'complex linkages' [3] They did not find '…a high proportion of firms maintaining complex linkages with local linkage partners…the geographic scope to this activity is often with metropolitan or interstate linkages partners…' (McDougall and O'Connor, 2005, pp. 18-19).

In light of the theoretical concerns and the weak empirical evidence revealed in Australian studies, at the very least it can be said that there remains uncertainty regarding the forces which cluster industries together, including growth industries. To put it more boldly, we are, I believe, still left asking the question what exactly is 'local' about clusters, and also, what makes some clusters more sustainable than others? One angle that has emerged in the 1990s and which continues to generate interest is that in a world of 'ubiquities' where trade, transport and the separation of conception and execution of production have tremendously expanded the geography of production, labour remains relatively place bound (Peck and Tickell, 1992; Hanson and Pratt, 1992; Peck, 1996; Jonas, 1996; Martin, 2000; Malmberg, 2003; Jenkins, 2004). Malberg (2003) (who interestingly is a leading scholar on the geography of knowledge) puts the proposition thus:

> Given that we have failed to show empirically that there is intense interaction going on between *firms* – whether traded or untraded – in regional clusters, could it be that spatial clusters of similar and related industries exist not because they make up a localized industrial system, but rather because they provide efficient labour markets for specialized skills? (Malberg, 2003, p.156).

If we accept that this proposition is worthy of investigation, where do we go from here? We could, for example, show, as Malberg implies, that certain skills sets are simply required for certain industries, so that a mutual attraction for firms and a local labour market develops – hence, we have particular types of industrial clusters. However the literature that examines local labour markets closely generally rejects this explanation as far too simplistic. Rather, it is argued there is a complex system of institutions, attitudes and opportunities which interact at the local level.

The Local Process of Labour Regulation

'Regulation theory' seeks to explain '…the processes by which capitalist social relations are reproduced, regularized, and "normalised" through a series of periodized "regimes of accumulation", the best known of which is "Fordism" ' (Peck, 2000, p. 63). An equilibrious logic lies at the heart of regulation theory. In capitalist societies, the overriding imperative is to maintain a surplus, but this can only be achieved by maintaining a balance between production and consumption. Too much production, or too much consumption, and the surplus comes under threat. The argument continues that from the Second World War until the 1970s, consumption was maintained at the appropriate level by a regulated wage fixing system; production was maintained at the appropriate level by control of the US dollar and global finance; the system, as a whole maintained its political and social legitimacy through the Keynesian safety net catching those who fell through the cracks.

[2] For a more thorough study of the Australian wine industry at the regional level, see Haughton and Browett (1995).
[3] 'Complex linkages' exclude 'simple linkages' such as buyer-supplier linkages, but include informal networking and partnerships. In other words, complex linkages tend to be a 'value-added' component to firm activity whereas simple linkages are essential (McDougall and O'Connor, 2005).

For a number of reasons including the OPEC oil crisis and changing consumer demands, the equilibrium became unbalanced and 'over accumulation' ensued (Harvey, 1990). It was argued that the new regime was based on flexible specialisation, a new international division of labour, mass casualisation of the work force and easier access to global finance. The geographical scale to which the theory applied was at the national level, although its hue varied from nation to nation.

This neat analysis is disputed, with some authors preferring the term 'after-Fordism' to indicate that what we now have is not regulation but an unsettled period, or at best a murky transition phase the end result of which is yet to be seen (Peck and Tickell, 1994). However, my object is not to dwell on regulation so described, for the simple reason that more recently, a group of scholars have attempted shift the focus to the local level. In other words, they argue there are local modes of regulation (Haughton and Browett, 1995; Peck, 1996; Digiovanna, 1996, Jonas, 1996; Kratke, 1999). A further development of this argument is that it makes more sense to refer to regulation as a *process* '…to replace the rather formalised and structured concept of mode of regulation. Drawing on these more fluid concepts, it then becomes possible to analyse processes of regulation at any relevant scale…' (Goodwin, 2001, p. 80)[4].

The regulation of local labour markets take centre stage in this approach.

> Although the industrial relations literature has discussed in detail the centrality of 'new workplace cultures' and management techniques in post-Fordist production models, it has overlooked the development of social practices and labour market institutions which have made workers more receptive to those new cultures and institutions' (Jonas, 1996, p. 324).

I argue there are three essential interacting features to the local process of labour regulation: (a) the social character of the labour market; (b) mediating organisations and services and (c) the labour process.

Table 1. Local process of labour regulation

Participants in the local labour market ***Social characteristics***	**Mediators** ***Local organisations and services***	**Local work place** ***Labour process***
Ethnicity	Language services	Labour versus capital - battle over the labour process
Gender	Child care	
Age	Housing	Fordism-flexible specialisation continuum - form of the labour process
Qualifications	Transport to work	
Class consciousness	Local governance	Workplace agreement - legal regulation of the labour process
Skilled-unskilled	Trade union	
Expectations	Training and education	Circuit of capital - financing the labour process

My view of the model is that the 'direction' it generally takes is from left to right. For example, gender is an obvious social characteristic of an individual. In the case of working mothers (and in the less common case of working fathers) child care (or lack of child care) is a service which meditates the relationship between the individual (with social characteristics) and the workplace outcome for that individual. Not only does it fundamentally influence outcomes in terms of hours worked, and when those hours are worked, it also creates expectations on the part of the worker and employer (Hanson and Pratt, 1992; Probert, 1995). For example, as Louise Johnson concludes from her study of casual women workers in Geelong, 'Gender had particularly impacted on education and confidence levels so that the female participants tended to aim for low level, unskilled 'women's work' – office work, cleaning, hospitality' (Johnson, 2003, p. 24).

[4] This argument requires further development for which I do not have space here. I am aware that not all economic geographers are happy with the idea of 'processes' and hold the view that 'fluid concepts' can be no more than 'fuzzy concepts' (Markusen, 1999 cf Regional Studies, 37 [6&7]). However I will use the term 'process' here because I take the author's point that 'mode' may imply a strict geographical demarcation when in reality it must surely be the case that legal, social or political regulation appears at a particular geographical scale, but has connections beyond that scale.

However, the 'left to right' operation I am suggesting here is a usual but not *necessary* one. There is considerable feed-back in this multi-faceted model. For example, the adoption of Japanese-style, flexible production team organisation (a labour process) can conceivably have a dampening effect on class consciousness (a social characteristic).

Case study: The food processing cluster in the City of Whittlesea, Melbourne

Figure 1. City of Whittlesea

Source: Department of Sustainability and Environment, 2002esea, 2006.

Food processing in Australia

In the food processing sector we certainly have a case of a relatively low skill, low technology industry not renowned for innovation either in Australia (Brown and Genoff, 2001) or internationally (Lagnevik et.al, 2003). It simply does not fit the bill of an advanced sector integrated with information technology and employing highly skilled workers.

National figures show that between 1996 and 2001, food processing employment across Australia declined from 165,032 to 155,400, or 5.83 %. As a proportion of all manufacturing employment, it fell from 16.53% to 13.96% but remains the single largest manufacturing employer. In Melbourne, employment numbers declined from 26,079 to 25, 798 but the share of all manufacturing jobs increased from 16.4% to 16.5 % (Smith and Jahan, 2003).

The sector has a massive presence in the overall economy with the twenty largest Australian food and soft drink manufacturers accounting for almost 50% of total industry turnover. Exports, mostly to APEC countries, has

averaging 6% growth per year over the last decade (DFAT, 2007). In short, we have a case of a resilient sector that seems to defy the archetypal 'learning regions' formula for success.

The sector in a suburban setting

The City of Whittlesea is Melbourne's most northern suburb and at 478 square kilometres is one of the largest municipalities. The Victorian state government has designated it a residential and industrial growth area. In 2005, its population was 127,000 and this is projected to double in the next twenty years (City of Whittlesea, n.d.)

Manufacturing is Whittlesea's largest employer (of both residents and in terms of local jobs) and the southern most suburb of Thomastown has a significant industrial zone. As such it was amongst the swathe of mid-suburban manufacturing suburbs that saw large job losses in the 1980s and 1990s. To the north, newer suburbs such as Mill Park are devoted to housing estates. These estates continue to grow northwards, although two-thirds of Whittlesea's land area remains rural or bush land.

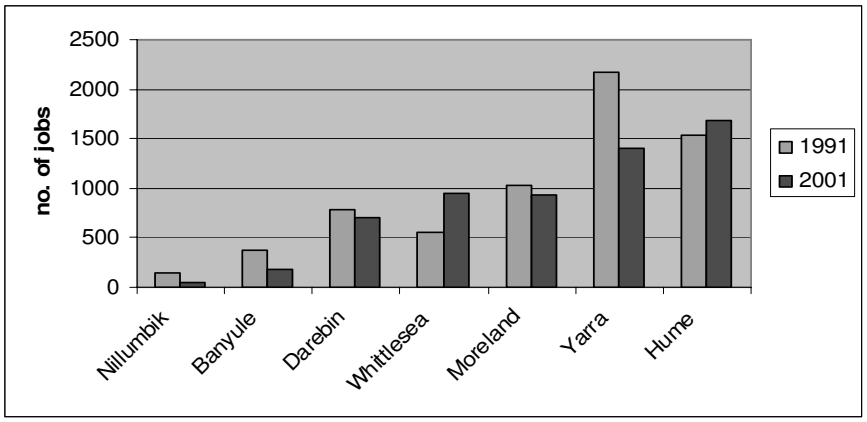
The food processing sector in Whittlesea is of interest for a number of reasons. First, Census data shows that the location quotient for food processing jobs in Whittlesea compared with Melbourne is 2.7. Second, Whittlesea appears to be attracting food processing jobs from elsewhere in Melbourne's northern region.

Table 2. Manufacturing and food processing employment in Whittlesea and Melbourne

	All jobs	Manufact.	Manufact. % of all jobs	Food process.	Food processing as % of all jobs	Food processing as % of all manuf. jobs
Whittlesea	29,491	8,506	28.84%	821	2.70%	9.60%
Melbourne	1,437,855	240,568	16.69%	25,322	1.76%	10.52%

Source: ABS Census 2001

Figure 2. Employment growth in the food processing sector in Melbourne's north, 1991-2001



Source: After Shepherd, 2004

Third, it is attracting considerable attention from a number of angles. Within the last three years, the Plenty Food Group was established by the City of Whittlesea specifically to encourage interfirm collaboration and the sector has established links with RMIT University which designed a supply chain study now administered by the council. A major economic development will be the relocation of the Melbourne Wholesale Food Market to a green field site in Whittlesea in 2011, bringing with it 7,000 jobs. The council's economic development unit is planning for Whittlesea to become a 'food hub' '…that incorporates manufacturing, wholesaling and their supply chains as well as research and development linkages with RMIT [University] and other academic institutions…' (NACC, 2006, n.p.). These developments clearly indicate a move towards developing – albeit from the top down rather than 'upwards' from the sector itself – the sort of 'institutional thickness' and interfirm linkages which are key themes in the 'learning regions' literature.

A glance at the Plenty Food Group membership reveals two things. First is the concentration of most firms in the one suburb, Thomastown (the location of the Thomastown industrial zone) reinforcing the point that these firms constitute a geographical cluster. Second is the diversity in size and ownership arrangements, ranging from a

number of large transnationals such as Chiquita Mushrooms and Golden Circle to small enterprises of ten or less employees.

Table 3. Plenty Food Group members

Employs	Business Name	Location
2	D & M Meats	THOMASTOWN
2	Pyramids Confectionery	LALOR
3	Kinglake Raspberries Pty Ltd	PHEASANT CREEK
3	Red Eye International Pty Ltd	THOMASTOWN
4	The Muesli Company	THOMASTOWN
5	Donnybrook Farmhouse Cheese	DONNYBROOK
5	Om Indian Cuisine	LALOR
6	Campania Olive Oil Co Pty Ltd	THOMASTOWN
6	Hellenec Cheese Pty Ltd	EPPING
7	Belgium Choc Pty Ltd	PHEASANT CREEK
8	A&R Quality Poultry (Choice Meat Supply)	THOMASTOWN
10	Blue Bird Products Pty Ltd	THOMASTOWN
10	Naturally Good Products Pty Ltd	THOMASTOWN
10	Palomba Antipasti Pty Ltd	THOMASTOWN
12	G & N Guzzardi Wholesalers Pty Ltd	THOMASTOWN
14	Matisse (Aust) Pty Ltd	THOMASTOWN
15	Slades Beverages	THOMASTOWN
15	The Confectionery House Pty Ltd	THOMASTOWN
18	Courtgem Pty. Ltd	THOMASTOWN
20	Heather Brae Shortbreads	THOMASTOWN
30	Floridia Cheese Pty Ltd	THOMASTOWN
30	Provincial Meats	MERNDA
35	Australian Food Industries Pty Ltd	THOMASTOWN
50	Advanced Catering Pty Ltd - Calruf Pty. Ltd	EPPING
50	Southern Meat / Marios Poultry	THOMASTOWN
60	Jalna Dairy Foods Pty Ltd	THOMASTOWN
75	Davies Bakery (Agri Industries Pty Ltd)	THOMASTOWN
90	Chris' Greek Dips & Yoghurt	THOMASTOWN
100	Bertocchi Small Goods Pty Ltd	THOMASTOWN
100	Pantalica Cheese Company	THOMASTOWN
100	Select Harvests Limited (Lucky Candy)	THOMASTOWN
120	La Ionica Poultry - Tuni Enterprises Pty Ltd	THOMASTOWN
150	Golden Circle Limited - The Original Juice Company	MILL PARK
200	Pacific Meat Packers	THOMASTOWN
245	Inghams Enterprises Pty Ltd	THOMASTOWN
550	Chiquita Mushrooms	MERNDA

Source: Data supplied by Plenty Food Group

Methodology and data analysis

The case study will employ a) quantitative data derived from customised census statistics from 1996 to 2006 and questionnaires and b) qualitative data from a series of in-depth semi-structured interviews. The overall objective of the study is to test the central argument that industries clusters due to a local regulatory regime which orders labour market supply and expectations rather than because of advantages provided by interfirm and other institutional linkages, localised knowledge generation and knowledge sharing. There are two temporal dimensions which underlie the case study. One is to gain an understanding of what the sector has become to date; clearly, however, the recent 'institutional turn' requires assessment of what the sector is *becoming*.

Between September and December, 2007, questionnaires will be distributed to the managers of 40 Plenty Food Group members, 10 non-members and to staff (there are approximately 800 workers in the sector in Whittlesea). Interviews will be conducted with 10 firm managers and 10 long-term members of the workforce. The data will be presented in the form of tables and pertinent quotations.

The first stage of the quantitative data collection is complete. The author has acquired and analysed labour market data on the sector in Whittlesea for the 1996 and 2001 Census. The following tables show a 'shrinking middle' in terms of occupational grades and by proxy, skill levels.

Table 4. Occupational change, Whittlesea food processing sector

	1996	2001
Occupation:		
Managers & Administrators	62	90
Professionals	14	21
Associate Professionals	16	23
Tradespersons & Related Workers	115	96
Advanced Clerical & Service Wkrs	12	11
Int Clerical,Sales,Service Wkrs	68	92
Int Production & Transport Wkrs	109	95
Elem Clerical,Sales,Service Wkrs	43	17
Labourers & Related Workers	282	356
Not stated/inadequately described	15	9
Total Occupations	**736**	**810**

Source: ABS Census 1996 and 2001

If we disaggregate these figures further, a strongly gendered pattern of job growth can be observed, with new senior positions being taken up by males, but with the most marked employment increase occurring amongst females in full-time positions in the low skilled 'labourers and related' category.

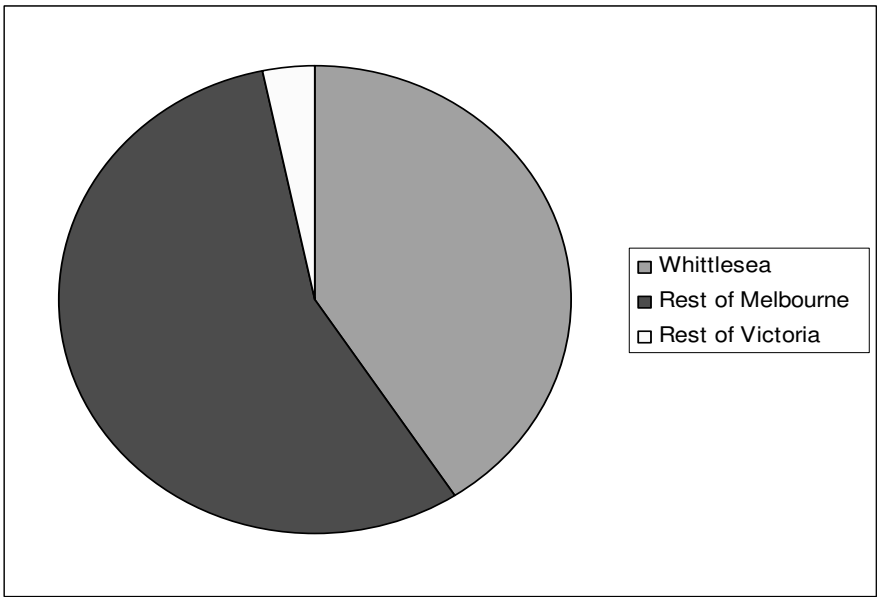
Table 5. Occupational change, Whittlesea food processing sector by gender and hours worked, 2001 Census

	Male					Female				
	P/time	F/time b	Not stated c	Total	Change since 1996	P/time	F/time	Not stated	Total	Change since 1996
Managers and professionals	3	106	0	109	40	0	25	0	25	2
Tradespersons and related	10	74	0	84	-28	3	9	0	12	-5
Labourers and related	32	130	4	166	27	51	136	3	190	47

Source: ABS Census, 1996 and 2001

The data also shows a marked self-containment, with almost 41% of workers in the sector also living in Whittlesea. The labour market is therefore strongly localised in two senses: through the geographical concentration of jobs and firms and through the high proportion of local residents working in the sector. It is therefore likely to prove fruitful in evaluating the impact on working life of local mediating organisations and services such as child care.

Figure 3. Location of residence for food processing workers in Whittlesea, 2001 Census



Source: ABS Census, 2001

Conclusions and implications

While it is obviously premature to draw conclusions from the preliminary work on the case study reported here, we can, I think, venture two broad scenarios and suggest what their main implications for public policy may be. The first scenario is that the influence of the recent 'institutional turn', which as I suggested seems to be largely 'imposed from above' will be apparent in the form of new collaborative activities producing new products or processes. In this case, a low wage, low skill sector would have shown itself to be capable of promising changes - and in this case the arguments associated with the learning regions approach is credible. The second scenario is that change has been negligible or has not altered the fundamental equation: firms cluster because of a local process of labour regulation. This would suggest a policy direction from the 'bottom up': that is, bolstering meditating services and organisations such as child care, local union activity, public transport, language services, etc. While the food processing sector may be 'unglamorous', this does not mean that it is inconsequential, in either research or policy terms.

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