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# A creativity-led rural renaissance? Amenity-led migration, the creative turn and the uneven development of rural Australia

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A B S T R A C T

This paper explores the relationships between amenity, creativity, internal migration processes and economic development in a significant proportion of rural Australia. In developing a predictive and synoptic model of migration attractiveness, we explore the extent to which rural regions and localities have been able to attract 'creative' human capital since 2001, the geographic distribution of such gains, and the extent to which 'creative class' presence is positively associated with business and employment growth. We find that 'creative industry' members find high amenity and high socio-economic status areas of rural Australia attractive places in which to live and work, yet this group's presence is not readily attributable to rural migration processes. Presence of the creative class, together with select rural amenity indicators, are powerful predictors of firm numbers but appear to have little influence over employment creation in rural Australia. Given these findings, the paper argues that building regional development policies around the attraction of the creative class is unlikely to yield major economic development gains.



## Introduction

Over the past decade or more, a not so subtle shift has occurred in the nature of academic, policy and practitioner interest in troubled urban and rural communities and economies. This shift – entirely consistent with the ideological move towards a neoliberal regional development policy agenda (Giddens, 1998; O'Neill & Argent, 2005; Peck, 2005; Peck & Tickell, 2002) – has also involved an altered empirical focus, drawing attention to the perceived qualities of communities and their inhabitants as sites and agents of economic regeneration. In line with notions of the 'hollowed-out' nation-state, and with the perceived failures of expensive 'smokestack chasing' development strategies, new regionalist thinkers and practitioners have redirected their focus to the micro-scales of the local and the individual (see Peck, 2005) in the hope of finding keys to economic and community success. Part of this agenda includes a careful consideration of those local social and cultural attributes that might contribute to development, with particular attention given to understanding the role of social and human capital in rural communities (e.g. Cocklin & Alston, 2003; Cocklin & Dibden, 2005). Equally, a growing body of work has been brought to bear on communities' capacities to exhibit leadership and entrepreneurialism in the face of adversity (Kroehn, Maude, & Beer, 2010; Sorensen & Epps, 1996).

Notwithstanding the insights produced by these research contributions, many rural communities – particularly those locationally disadvantaged and/or supported by narrow, primary industry-dependent economic bases – face severe structural impediments to arresting local decline. Although we are wary of broad brush, binary stereotypes of regional decline/growth across non-metropolitan Australia, there is general acceptance that those remote inland local communities and regions that depend heavily on extensive agriculture face major challenges in retaining private and public goods and services providers in the face of ongoing and likely future net migration loss, structural ageing and population decline. Moreover, regional development policy has tended to favour a market-led approach that has resulted in minimal active government involvement in economic and social regeneration.

Confronted with the grim realities associated with the current policy climate and a sobering demographic picture, many rural communities have turned to alternative means of buttressing their population bases, hopeful of attaining or retaining the critical

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demographic mass necessary to launch a virtuous circle of growth (Myrdal, 1957). Most have followed the path of 'place marketing', investing relatively large sums to tout their wares to potentially curious metropolitan workers, business owners and retirees, in several cases via 'the-bush-comes-to-town' expos (Connell & McManus, 2011; Gibson & Connell, 2012). Others have adopted a more direct approach, calling for expressions of interest from jaded city-folk to join their putatively tight-knit communities (Argent, 2011). Often these development strategies aim to capitalise on local amenity, particularly environmental and landscape attributes, cultural heritage and the quality of their built environments (Argent, Smailes, & Griffin, 2007). Indeed, various aspects of amenity are increasingly seen as important sources of competitive advantage as places aim to lure new residents and stimulate economic development (Chi & Marcouiller, 2011; McGranahan, 1999).

However, it is apparent that rural communities might be becoming fussier about the types of migrants they wish to attract. While those with locally-needed skills, together with the disposition to 'pitch in' to community life, are most welcome, welfare-led migrants and urban 'dropouts' have been widely regarded as problematic by country town community leaders (see Costello, 2007; Curry, Koczberski, & Selwood, 2001; Tonts & Greive, 2002). Relatedly, community and scholarly attention has increasingly focused on the factors that attract and retain people of originality, flair and talent – the so-called 'creative class' (Florida, 2003). Thus far, though, the 'creative class' thesis of local economic development has been applied by researchers in a peculiarly metrocentric fashion, largely eschewing rural regions and the very real development issues that they face (though see Florida, Mellander, & Stolarick, 2011; Jauhiainen & Suorsa, 2008; Petrov, 2008). In part, this paper contributes to the growing literature that seeks to correct this bias. Our main aim is to explore, in the Australian context, the increasingly popular, though contentious, thesis that rural communities' levels of 'creative capital' – and their capacities to attract this capital – are a major determinant of their developmental futures. In the words of its primary protagonist:

> The rise of the Creative Economy has altered the rules of the economic development game. Companies were the force behind the old game and cities measured their status by the number of corporate headquarters they were home to … But while companies remain important, they no longer call the shots. As we have seen, companies increasingly go, and are started, where talented and creative people are … The bottom line is that cities need a *people climate* even more than they need a business climate. This means supporting creativity across the board – in all of its facts and dimensions – and building a community that is attractive to creative people, not just high-tech companies (Florida, 2003, p. 283, emphasis in original).

Generally, rural regions have been overlooked as 'hotbeds' of creative production in the academic literature. Yet a growing number of researchers have argued that Florida's arguments also apply to at least some of the rural regions of advanced nations (Bell & Jayne, 2010; Hansen & Niedomysl, 2009; McGranahan, Wojan, & Lambert, 2011). Economic innovation is not the sole preserve of cities, and the history of Australian invention is replete with examples of farm- and rural-based ingenuity (e.g. the stump-jump plough, the mechanical shearing handpiece, cereal breeding technology). If the expanding number of local arts, crafts, music, food and wine festivals is anything to go by, many rural regions and individual communities are havens of creative activity, broadly defined (e.g. Gibson & Connell, 2012; Gibson & Davidson, 2004). There is also evidence that some rural areas – for example, those offering outdoor recreation opportunities – are especially attractive to the 'new age' creative class (McGranahan et al., 2011). In this paper, we seek to explore the basic parameters of the creative class within rural south-eastern and -western Australia by testing their associations with other defining characteristics of the rural settlement system. The paper's primary aim is to test the hypotheses that high amenity rural areas are especially attractive to 'creative' workers and that this group's presence provides a stimulus to local and regional economic development, generating the conditions for a virtuous circle of growth and prosperity, as measured by local business and employment expansion.

## The creative class and rural development reconsidered

Florida's creative class thesis became, for a time at least, one of those once-in-a-generation ideas that capture the research agenda of academics (or, on occasion, attract their scepticism and disdain (Peck, 2005)), the policy agenda of bureaucrats and political lobby groups, and the imagination of the wider public. As popular and seductive as the creative class thesis is, however, it is not without its critics (e.g. Barnes, Waitt, Gill, & Gibson, 2006; Hoyman & Faricy, 2009). A growing number of writers have critiqued this thesis, noting its: reification of social and cultural practices; dubious approach to category development; metrocentrism; and the lack of statistical rigour in Florida's hypothesis testing procedure. We deal with each of these criticisms in turn below.

For Gibson and Klocker (2005), the uncritical application of Florida's index to the measurement of regional creativity and innovation and, presumably, to their enhancement, is problematic. They argue that creativity – in the sense that Richard Florida used the term – is an inherently social activity, involving artists, appreciative audiences and other consumers in the collective production, reproduction and consumption of 'culture'. Such communal social values and activities are philosophically inimical to the atomistic ontology of contemporary neoliberal regional development discourse and policy. As Gibson and Klocker (2005) argue, creative activity is not readily measurable in any statistically meaningful sense. Therefore, the development of superficially simple quantitative indices – and their constituent categories – to measure artistic and related creative activity and its impacts amounts to a reification of the highly nuanced and qualitative nature of social and cultural endeavour.

The 'creative class' thesis has also been questioned on more technical grounds. As has been emphasised by a number of researchers (e.g. Brennan-Horley & Gibson, 2009), many creative workers (especially artists and other 'cultural workers', broadly interpreted) occupy a liminal space between formal and informal labour markets; a situation which undercuts the supposed solidity of the occupational categorisation central to the measurement of the 'creative class'. The 'pro-am' nature of creative work, for many artists, stems from the lack of remuneration for at least a proportion of their artistic effort; a situation which forces many into a fragmented and fluid working life involving bouts of artistic labour intertwined with formal paid (if casual, part-time or temporary) employment. Therefore, census-based measures of creative employment are likely to be unreliable indicators of the full depth and breadth of this group due to under-counting (Bennett, 2010; Brennan-Horley and Gibson, 2009; Luckman, 2012). More specifically, McGranahan and Wojan (2007) argue that Florida's construction of the creative class includes some rather questionable occupational types, such as hospital and primary school aides and attendants, who are also relatively non-migratory. These inclusions undermine his contention that the creative class is a highly footloose and spatially selective group. However, we would accept that a narrow definition of the creative class as simply those involved in the arts and creative industries is also problematic. As Hoyman and Faricy (2009) point out, there are arguably two strata of the creative

class: the supercreative class, which incorporates occupations such as computer scientists, academics, architects, artists; and, the creative professionals, including managers, accountants and lawyers (see also Florida, 2003; McGranahan & Wojan, 2007). However, the broad occupational data made available at local and regional scales by official agencies is often unable to be further decomposed for privacy reasons, hampering any attempt to precisely classify the 'creative class' at these scales (McGranahan & Wojan, 2007).

A further criticism of the 'creative class' thesis centres on its almost singular focus on big cities. Sorensen (2009) has criticised Florida's thesis for its perceived metrocentrism (a condition akin to the ecological fallacy by which the affairs of cities are seen to encompass those of the broader society, thereby occluding specifically rural achievements), and for completely overlooking the innate creativity, innovativeness and entrepreneurialism of rural society, particularly the farm sector, in which locally-initiated bespoke solutions to complex ecological, agronomic and economic problems are both commonplace and essential. Other researchers have linked Florida's dictum that "quality of place" is a key factor in attracting the creative class, to another expanding research area: amenity-led rural migration. Briefly, the argument here is that high amenity rural areas, especially those affording ample outdoor recreation opportunities, are keenly sought out by young, creative types as places to live and work, and that they are therefore just as, if not more attractive to this group than are 'hip' inner-city precincts (McGranahan & Wojan, 2007; McGranahan et al., 2011). Relying on an idyllic construction of rurality, Verdich (2010) found that, for some artists and cultural workers at least, smaller centres offer better conditions for creation due to their peaceful ambience, potential for better work/life balance, and easier access to inspiring natural environments. Although some have argued that a rural location can hinder (youthful) creativity (Gibson, 2008), overall there would appear to be a logical problem with the assumption that large cities are the sole province of creativity and the creative class.

Finally and relatedly, McGranahan and Wojan (2007) criticise Florida's simplistic approach to the statistical testing of his thesis, especially given: a) the wide range of variables likely to influence the mobility of the creative classes; b) the hypothesised effects of this group on local economic development, chiefly employment; and c) the probable high degree of intercorrelation within his model. In response, McGranahan and Wojan (2007) developed an extensive multivariate model to predict the impact of rural creative class employment on local employment creation. They found a strong positive relationship between natural amenity and creative class location and in-migration and, in turn, contended that the proportional size of the creative class was also closely related to total employment growth at the local scale (McGranahan & Wojan, 2007). More recently, they expanded this analysis by investigating the possible links between rural amenity, the rural creative class, entrepreneurialism, firm start-ups and employment creation in the US (McGranahan et al., 2011). This study revealed strong positive statistical relationships between the local size of the creative class, and the rates of new business formation and job creation in high amenity areas, with the strength of this association diminishing as amenity levels also declined. Notably, although lower density, more agriculturally-dependent regions exhibited higher than average rates of business commencement, their employment creation performance was below average. As the authors wryly observed, in these cases "… entrepreneurship is less an answer to economic stagnation than a symptom" (McGranahan et al., 2011, p. 547).

In spite of these deep philosophical and more technical criticisms, there is little doubt that the popularity of Florida's notion signals a transition in regional development strategy from the 'smokestack chasing' business recruitment strategies of the Fordist era to a concern to create the right local ambience (tolerance and openness) – together with the appropriate economic and related 'hardware' (technology, particularly information technology) normally considered necessary for economic development – for highly qualified workers and entrepreneurs to relocate to or to remain in non-metropolitan areas (Florida, Mellander, & Stolarick, 2008; McGranahan et al., 2011). This brings us to the domain of migration studies and, particularly, to the field of amenity-led migration.

There have been few Australian analyses of the phenomenon of amenity-led migration into rural areas to complement the international research cited above, and fewer still attempts to relate the issues of rural amenity and the 'creative class'. Argent et al. (2007) developed a multivariate model to explore the determinants of exurban migration into south-eastern Australian rural communities for the periods 1976–1981 and 1996–2001, developing a rural amenity index as part of this approach. The spatial distribution of this amenity index (comprising measures of terrain, rainfall, remoteness, beach and inland river accessibility and tourism potential) accorded largely to expectations, with high scores (representing high amenity) occurring in highly popular in-migration zones such as the coastal zones, the peri-urban fringes of the capital cities and select intensive industrial production zones. There were, however, some surprising results with some inland communities scoring highly, and some coastal areas in South Australia receiving low scores. The capacity of the model to predict in-migration flows into the south-eastern Australian case study communities was impressive, with the index producing coefficients of $r = +.47$, $p \leq 0.001$ for in-migration between 1976 and 1981, and $r = +.57$, $p \leq 0.001$ for in-migration for the 1996–2001 intercensal period (Argent et al., 2007). Subsequent research by Argent, Tonts, Jones, and Holmes (2011) explored the relationships between rural amenity on a slightly broader scale, incorporating Western Australia, and found that, for the intercensal periods 1991–1996, 1996–2001 and 2001–2006, the amenity index is a good predictor of *net* migration, with coefficients ranging between +.57 and +.64 over the period. To date, though, the potential relationship between amenity migration, the incidence of the 'creative class', and the potential contribution of both to economic development in rural Australia has been relatively unexplored. For the remainder of this paper we investigate this very topic.

## Amenity, creativity and local factor growth: towards a model of their interrelationships

### *Approach to testing*

Following McGranahan and Wojan's (2007) and McGranahan et al.'s (2011) re-specification of the creative class hypothesis, the remainder of the paper employs a two stage, general-to-specific, approach to modelling the relationships between amenity, the presence of the creative class and local economic development in south-eastern and south-western rural Australia. First, so as to establish whether or not creative workers are indeed attracted to amenity-rich rural locations, we use simple correlation and multiple regression analysis to explore the relationships between rural amenity, internal migration and 'creative class' occupations, and changes in the levels of these occupations, over the 2001–2006 intercensal period. In the second major phase of testing, we investigate the hypothesised relationships between presence of the creative class, local business numbers and change in total employment over the same five year timespan. Prior to this modelling procedure, though, we describe the major independent and dependent variables.

*Independent and dependent variables*

Florida's thesis maintains that the creative class, as a result of its very presence, has a positive effect on local economies through their own involvement in production and consumption. Moreover, this group's presence is thought to induce further multiplier effects in accordance with classical regional development theory, as new services emerge to cater to this putatively discerning group and as more creative class members are drawn to the area. For Florida et al. (2008), the accretion and concentration of creative human capital over time stems from the fact that places with a high creativity location quotient are more likely to become home to more open and tolerant societies. Recursively, places with prominent creative production and consumption activities stamp themselves as cultural economy 'hotspots', thereby enhancing the amenity of the locality and increasing its attractiveness to other creative workers and the wider population (Florida et al., 2008). This would suggest that places with a healthy endowment of creative workers at time $t$ should, *ceteris paribus*, exhibit greater numbers of the creative class at time $t+1$.

However, it is critical to realise that creativity rarely exists or flourishes in isolation (Sorensen, 2009): it can be expected, at least in part, to reflect and to be influenced by the more basic environmental, geographical, economic and cultural attributes of rural regions and communities (McGranahan & Wojan, 2007), many of which are themselves complexly interrelated. Notwithstanding the observations above regarding artists and other 'true' cultural workers, it might be safely assumed that this group generates substantial multiplier effects through its consumption of quality (and more expensive) local goods and patronage of quality service suppliers across a wide spectrum of industries. Furthermore, there is a plethora of conditions and forces impacting upon the attraction (and/or recruitment) of this allegedly footloose and highly spatially selective group.

The key determinants of the incidence and growth of creative class occupations in rural Australia – as we see them – are described below. Drawing on the above literature review, we argue that while the original presence (or endowment) of the creative class in rural areas can be attributed to a wide range of historical, social and environmental factors and happenstance, the *growth* of this group is most likely to be associated with in-migration processes and, particularly, with net migration gains. The last mentioned is a measure of a community's and an economy's capacity to support its local population, including through the provision of satisfying and remunerative work, satisfactory services and attractive environments in which to live, work and recreate, encapsulated broadly (and often vaguely) in the notion of *rural amenity*. According to McGranahan et al. (2011), the creative class has its most direct effects on rural economies via its stimulatory influences upon regional productivity (i.e. wages – not considered in this paper), upon the growth of local employment and, then, upon the overall expansion of the broader economy through multiplier effects, leading to further labour recruitment via *in-migration* and *net migration* gain. Given the high concentration of Australia's population within its capital cities (a national mean of c. 65%), and the even higher concentration of creative class occupations within these cities, it seems self-evident that some account needs to be taken of counterurbanisation flows (Burnley & Murphy, 2004; Verdich, 2010). Hence, the incorporation of the *proportion of in-migrants who are ex-(state) capital city migrants* into the first phase of the model. Data on these three migration measures for the 2001–2006 intercensal period – in-migration rate, net migration rate and the percentage of all rural in-migrants originating from the capital cities – were drawn from the 2006 national Census of Population and Housing.

Amenity is itself a multiply determined quality (Argent et al., 2007; Deller, Tsai, Marcouiller, & English, 2001; Hunter, Boardman, & Saint Onge, 2004; McGranahan, 1999). In the Australian context, it is comprised of a complex of environmental, economic, locational and cultural factors that, as already discussed, explain a substantial proportion of in-migration into south-eastern Australian rural communities. The constituent elements of the amenity index developed by Argent et al. (2007) are set out in Table 1.

For each of the multiple regression models deployed, rural population density (measured as the number of occupied dwellings per 100 $km^2$ at the 2001 Census, natural logs) was included as a control variable, providing some important local demographic and economic context for the analysis. Two contrasting measures of socio-economic status were also added to these multiple regression models – the socio-economic index for areas (SEIFA) for 2006; and a high household income measure (>$2500/week in 2006) – as a means to capture some aspect of the socio-economic context of each of the constituent spatial units. The SEIFA is itself comprised of four indices – the Index of Relative Socio-Economic Disadvantage, the Index of Relative Socio-Economic Advantage and Disadvantage,

**Table 1**
Amenity index indicators.

| Indicator | Source |
|---|---|
| Median altitude range (m above sea level) | The terrain variable used in this analysis was compiled using a digital elevation model (DEM) applied to a 1 km graticule of the Australian continent. |
| Median slope (%)[a] | As for median altitude range. |
| Median annual rainfall (mm) | Average of records available from local recording stations. The vast majority of community centres possess records reaching back over 100 years. Data available from the Australian Bureau of Meteorology website (http://www.bom.gov.au). |
| Settlement duration (yrs) | Calculated as the period since the date of proclamation (or, in some cases, survey) of the community's principal town. |
| Accessibility | Derived from the Accessibility/Remoteness Index of Australia ('ARIA-plus' 1996 version) (Department of Health and Aged Care and the National Key Centre for Social Applications of Geographical Information Systems (GISCA), 1999). As a high ARIA-plus score indicates a high degree of remoteness, all scores were multiplied by −1 prior to testing. |
| Irrigation water resources (% farm income from irrigation) | The proportion of a community's total value of agricultural produce attributable to irrigation, calculated from the Australian Bureau of Statistics Agricultural Census for 2001. |
| Beach proximity (km) | Calculated road distances between a rural community's main town and the nearest beach or coastal centre. All scores multiplied by −1 prior to testing. |
| Employment in tourism and related services employment (% of total workforce) | Proportion of the 2001 workforce employed in the accommodation, cultural and personal services industrial category for each community. |

[a] Median slope is a percentage-of-slope value derived by the Zevenbergen and Thorne Method, using a 3 × 3 window (Burrough & McDonnell, 1998, p. 190).

the Index of Education and Occupation, and the Index of Economic Resources (ABS, 2013). Finally, no readily available and reliable surrogate for tolerance could be found across the breadth of our study area and this criterion has therefore been excluded from the present analysis.

At the centre of this paper's model is the identification of the nature of the so-called 'creative class'. In spite of the problems associated with measuring this elusive employment category, the data on *creative class occupations* were obtained from the 2001 and 2006 Censuses. Consistent with McGranahan and Wojan (2007) and McGranahan et al. (2011)'s usage, we selected professionals and managers employed in non-agricultural and mining industries as proxies for this group. The new Australian and New Zealand Classification of Occupations (ANZCO) led to some re-classification of the so-called creative class occupations, with some associate professional occupations in the technical fields of information and communication technology (ICT), building and engineering promoted into the 'professionals' category and, thus, into the creative class. The creative class, as defined in this paper, therefore consists primarily of independent key decision-makers in the private and public sectors, many of whom possess high-level education and training qualifications. These workers include, *inter alia*, scientists, architects, academics, non-agricultural business owners and entrepreneurs (see Table 2).

The main dependent variables for the second phase of modelling are local *business numbers*, and changes (growth or decline) in these over time, and *employment change*. The business number data were gathered from the Australian Bureau of Statistics' publication and database, 'Counts of Australian Businesses' (Cat. No. 8165.0) for two periods: 2003–2007 and 2007–2009 (ABS, 2007, 2011). Agricultural and mining businesses were removed from these data prior to testing. Employment data were extracted from the 2001 and 2006 Censuses. All variables entered into testing were checked for normal distribution and transformed using appropriate measures where necessary.

Briefly, then, we hypothesise the following chain of causality: high amenity rural areas are able to attract disproportionate numbers of putatively creative workers, a high proportion of whom are likely to be ex-capital city migrants. Following McGranahan et al. (2011), the larger the size of the creative class, the more entrepreneurial and innovative the local economy will become, manifested, in the case of this argument, by numbers of local businesses and growth in these over time. This is not the only contribution that this select group makes to local economic development, for it is also hypothesised that there is a strongly positive relationship between the size of the creative class, business numbers (and their growth over time) and employment growth.

### *The study area and period*

The study was undertaken on a crescent-shaped area that stretches from the New South Wales/Queensland border in the northeast – as far inland as Lightning Ridge to South Australia's Eyre Peninsula in the southwest – together with the permanently settled areas of south-western Australia (Fig. 1). This incorporates a large proportion of the permanently inhabited agricultural regions of Australia, and represents the entire gamut of rural (though not remote) locality types, from the marginal farming/pastoral country of far western South Australia, south-western New South Wales and the inland fringes of the Western Australian wheatbelt to the typical, burgeoning 'sea change' communities of the New South Wales North Coast (Burnley & Murphy, 2004). Major urban areas have been excluded from the analysis, along with most of the metropolitan fringe and penumbral zone of the 'city's countryside' (Bryant & Johnston, 1992). The New South Wales metropolitan areas have been particularly broadly defined, including the Lower Hunter (including Newcastle), Central Coast and Wollongong regions. Also eliminated are contiguous uninhabited areas of 150 square kilometres or more, such as National and State Parks, State Forests and major water bodies. The analysis is based on 489 spatial units, defined by the authors to approximate the social catchments of all significant country towns (see Smailes, 2002 for definitional and analytical details). To avoid double counting, overlaps between catchments are split along median lines, so that the spatial units provide an exhaustive and mutually exclusive cover of the defined study area.

In general and where possible, data at the Census Collector District level has been allocated 'up' to the social catchment. However, some Census-derived data is not available at this fine degree of spatial resolution, as is the case with the internal migration, employment and business count data used in this paper. In these instances, data at the Statistical Local Area (SLA) level – the next level up in Australia's official statistical geography – has been used instead. The social catchments are generally smaller than the SLAs, and frequently overlap multiple SLAs, necessitating the allocation 'down' of SLA level data to the social catchment areas. The analysis basically covers the period of the first decade of the new millennium, drawing on the 2001 and 2006 national Censuses, together with the aforementioned business count data (2003–2009). At the time of writing, the Census-derived variables were not able be updated with 2011 Census data.

**Table 2**
The 'creative class' as derived from 2001 and 2006 censuses.

| ANZCO major group | Sub-major group | Typical occupations |
|---|---|---|
| 1. Managers | | |
| | 11. Chief executives, general managers and legislators | |
| | 13. Specialist managers | Advertising and sales managers, business admin. managers, corporate services managers, finance managers, policy and planning managers, research and development managers. |
| 2. Professionals | | |
| | 21. Arts and media professionals | Actors, musicians, authors, painters, journalists. |
| | 22. Business, human resource and marketing professionals | Accountants, treasurers, financial dealers, economists, public relations professionals. |
| | 23. Design, engineering, science and transport professionals | Pilots, architects, scientists, fashion designers, web designers, engineers, wine makers. |
| | 24. Education professionals | University lecturers (NB. School teachers omitted). |
| | 26. ICT professionals | Web developers, multimedia specialists, database managers. |
| | 27. Legal, social and welfare professionals | Barristers, counsellors, historians, psychologists. |

Source: Australian Bureau of Statistics/Statistics New Zealand, 2006.

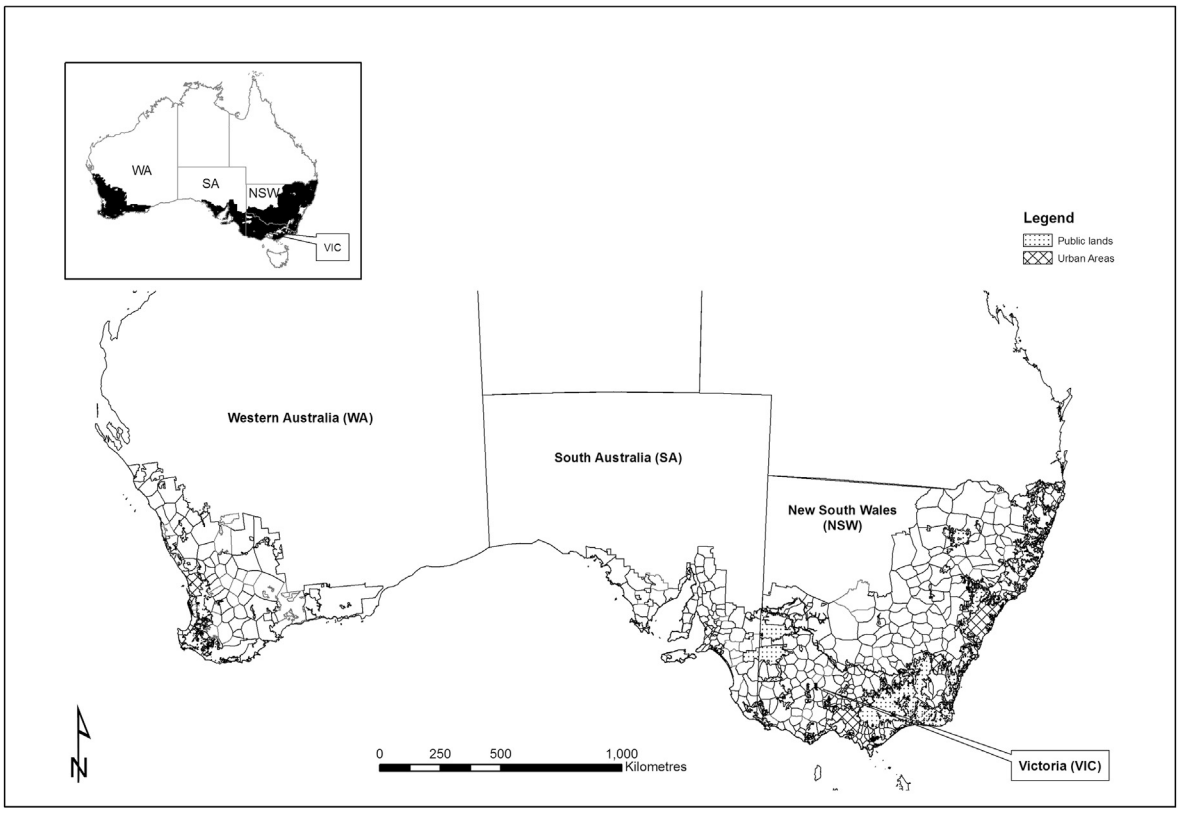


**Fig. 1.** The study area, south-eastern and -western Australia.

Table 3 displays the descriptive statistics for each of the independent (excluding rural amenity) and dependent variables. The selected managerial and professional occupations made up, on average, just over 21 per cent of the combined social catchments' labour force at the 2006 Census, though this proportion ranged from ten per cent (Urana and Kimba, located in the more remote parts of the New South Wales and South Australian cropping belts respectively) to over 35 per cent (Bungendore, close to the nation's capital, Canberra).

In numerous respects, the 'hot' and 'cold' spots of creative employment conform to expectations, with well-known artist enclaves (covering the gamut of artistic creativity from music making, to writing, to painting and ceramics) such as Byron Bay, Mullumbimby (see Gibson & Connell, 2003) and Bungendore (Fig. 2) featuring strongly. Also, communities within the peri-urban fringe of the four capitals and the larger regional centres, together with those centres that are also university towns (e.g. Armidale, Lismore, Bendigo, Wagga Wagga) fit the category of key creative class places. Not surprisingly, the dry cropping and livestock belt communities of the South Australian Murray Mallee, the Victorian Wimmera, the Western Australian Wheatbelt and the New South Wales River in a region have the smallest proportions of their workforces in the creative classes. A more alarming set of figures is associated with the change in creative class employment by social catchment (see Table 3). These point to the evisceration of the professional and managerial classes of many inland communities. For many such communities, the 2001–2006 intercensal period was a deeply troubled one, with a protracted drought combining with an ongoing rationalisation in farm numbers working to further drive down rural populations and, hence, public and private services.

Table 4 shows the descriptive statistics for the dependent business and employment variables used in the following analysis. In a study area as spatially extensive and internally heterogeneous as the one used in this paper there is an understandably high degree of variance in business numbers and in the size of the workforce over the period of the early to late 2000s. Overall, there was steady business growth between 2007 and 2009 but, of course, this masks high rates of business loss in some of the (generally but not exclusively) more remote communities, and very high rates of gain, again generally but not exclusively located in the more accessible zones of the peri-urban fringes of the capital cities, regional centres and the coastal belt. These non-metropolitan businesses are

**Table 3**
Descriptive statistics for selected rural 'creative class' indicators, south-eastern and -western Australia, 2001–2006.

| Measure | 2001 Density (occ. dwells./100 km$^2$) | In-migration rate, 2001–2006 | Net migration rate, 2001–2006 | Creative occs., 2006 (nos.) | Creative occs., 2006 (% of labour force) | Per cent change in creative class, 2001–2006 | Per cent of all in-migrants from capitals, 2001–2006 |
|---|---|---|---|---|---|---|---|
| Mean | 104.4 | 198.6 | −11.4 | 841 | 21.7 | −24.38 | 34.3 |
| Median | 38.8 | 190.8 | −13.8 | 448 | 21.0 | −34.46 | 30.4 |
| Minimum | 1.2 | 86.72 | −211.1 | 23 | 10.3 | −78.49 | 10.61 |
| Maximum | 1449.16 | 623.5 | 317.4 | 10 508 | 44.3 | +207.79 | 81.58 |

Source: Australian Bureau of Statistics (ABS) 2006 Census Community Profile series – Time Series Profile, Cat. No. 2003.0, Australian Bureau of Statistics, Belconnen.

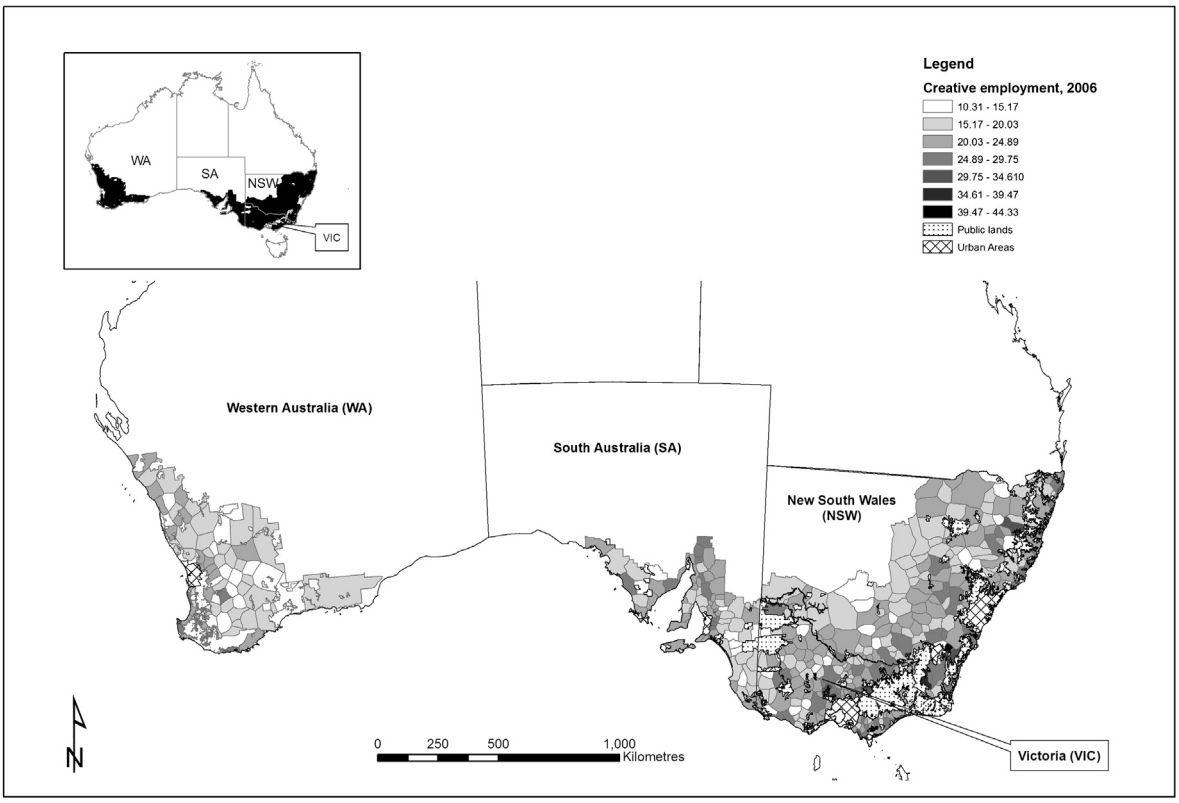


**Fig. 2.** Creative class occupations, per cent of total community workforce, 2006, south-eastern and -western Australia.

generally dominated by the self-employed, with an average of nearly 60 per cent providing work for no-one but the owner. Almost all of the remainder employed between one and 19 workers, though the majority of firms in this category hired less than five employees. There are obviously very few large employers (i.e. 20+ employees) across the entire study area. As this table shows, total employment growth was relatively muted across the 489 social catchments between 2001 and 2006, with a median level of 4.26 per cent. Of course, this figure disguises an enormous diversity of employment growth and decline, as indicated by the minimum and maximum figures given in Table 4. The spatial expression of total employment change is also complex, though some general patterns can be observed. The greatest rates of employment growth were confined to the major regional centres (e.g. Bendigo), coastal communities in so-called 'sea change' zones of relatively rapid in-migration, peri-urban fringe communities and inland high amenity regions (e.g. the Victorian communities of Mansfield and Kilmore that were subsequently devastated in the February 2010 bushfires). Where inland, cereal/oilseed belt communities have experienced faster than average employment growth this appears to have been associated with nearby mining developments. Otherwise, smaller communities lying outside of the sphere of influence of major regional centres, capital cities or resource or tourism developments have seen shrinkage in their local labour forces.

### *The creative class as an engine of local economic expansion*

As already noted above, previous research by the authors has established a positive and increasingly strong relationship between amenity and net migration in rural Australia (Argent et al., 2007, 2011). Pearson's correlation testing of the hypothesised relationship between rural amenity and the number of creative class workers reveals a similar pattern (amenity × 2001 creative occupations (nos.), $r = +.29$ ($p \geq 0.001$); amenity × 2006 creative occupations (nos.), $r = +.51$ ($p \geq 0.001$); amenity × % change in creative occupations, 2001–2006, $r = +.58$, $p \geq 0.001$). Interestingly, the strength of the relationship is increased if the *proportion* of creative workers of the local workforce is used instead of raw *numbers* (amenity × 2006 creative occupations, $r = +.60$, $p \geq 0.001$).

*Ceteris paribus*, it would be expected that migration would play a substantial role in explaining the levels of this group's presence in

**Table 4**
Descriptive statistics for business and employment indicators, south-eastern and -western Australia, 2001–2006.

| Measure | Business nos. 2003–2007 | Business nos. 2007–2009 | Per cent change in bus. nos., 2007–2009 | Per cent businesses with no employees, 2009 | Per cent businesses with 1–19 employees, 2009 | Per cent businesses with 20–49 employees, 2009 | Per cent business with 50+ employees, 2009 | Per cent change in labour force, 2001–2006 |
|---|---|---|---|---|---|---|---|---|
| Mean | 508.2 | 534.4 | +7.5 | 58.8 | 37.4 | 2.9 | 0.9 | 4.5 |
| Median | 219.6 | 226.7 | +4.9 | 58.5 | 37.7 | 2.5 | 0.8 | 3.8 |
| Minimum | 7.4 | 10.2 | −54.6 | 29.3 | 6.7 | 0 | 0.0 | −59.80 |
| Maximum | 6966 | 7646 | 266.0 | 93.3 | 56.5 | 35.9 | 8.9 | 159.7 |

rural areas. However, the statistical evidence is mixed on this question. Creative class occupations in 2006, as a proportion of the total local workforce, are only weakly associated with 2001–2006 in-migration rates (Pearson's $r = +.25$, $p \geq 0.001$), and the relationship between *numbers* of the 2006 creative class and 2001–2006 in-migration rates is even weaker ($r = +.19$, $p \geq 0.001$). However, a stronger association exists between 1996 and 2001 in-migration rates and the rate of change in creative class occupations between 2001 and 2006 ($r = +.56$, $p \geq 0.001$), suggesting a lagged effect of in-migration on creative class presence. This contention is supported by the correlation coefficient for 1996–2001 in-migration rates × 2001 creative class occupations ($r = +.28$, $p \geq 0.001$).

As with the relationship between rural amenity and internal migration processes, though, net migration is a more intellectually robust indicator of local demographic change than in-migration and it also provides statistically stronger associations between migration processes and the growth or otherwise of the creative class (see Table 5). Interestingly, there are only weak relationships between counterurbanisation migration and the presence of the creative class, and of change therein over time. Therefore, while migration processes account for a reasonably substantial and growing proportion of the creative workers found in the study area, recruitment from the capital cities plays an apparently minor role in explaining their presence.

In order to explore these relationships in more depth and to ascertain which particular aspects of amenity and migration had the greatest influence on the presence of the creative class in 2006, a multiple regression analysis (backwards elimination) was performed (Table 6). Due to an unacceptably high degree of multicollinearity between the three creative class variables, the 2001 creative class (numbers) variable was dropped from this phase of the analysis. Multicollinearity was not present to any substantial degree between the remaining variables. Broadly speaking, this model confirmed the basic statistical association between amenity, migration and creative class presence but, like the simple correlation analysis just reported on the model better predicts the *proportion* of creative class employment rather than aggregate creative employee numbers, giving an $R$ of +.78 and an $R^2$ of +.61 ($p \geq 0.001$) for the former and an $R$ of +.65 and an $R^2$ of +.42 ($p \geq 0.001$) for the latter. Interestingly, two of the key control variables – rural population density and high household incomes – were amongst the most reliable predictors of creative class presence in both forms (nos. and %). This suggests that this 'elite' segment of the workforce is drawn to rural areas which are rich in opportunities for social and economic transactions and/or just plain rich! Only three variables included in the amenity index play a statistically significant function in 'explaining' the local incidence of creative workers – the two terrain indicators of median slope and altitude range (for creative class numbers) and the proportion of tourism and related industry workers in the local labour market (for % creative class workers). Overall, these results suggest that how 'creative' a community is, in terms of the relative composition of its labour force, depends somewhat on its local 'excitement factor' (i.e. availability of sites and events of tourist interest), relative wealth and local population density. Crucially, it does not appear to be at all related to internal migration processes, with the level of exurban migration as a per cent of local in-migration flows eliminated from both models, and net migration removed from the model predicting the local incidence of the creative class as a proportion of the total labour market.

**Table 5**
Correlation testing of relationships between net migration and 'creative class' employment, 2001–2006, Pearson's *r*.

| | 2001 Creative class (nos.) | 2006 Creative class (nos.) | 2006 Creative class (% of workforce) | 2001–2006 % Change in creative class |
|---|---|---|---|---|
| 1996–2001 Net migration | +.33 | | | +.56 |
| 2001–2006 Net migration | | +.44 | +.42 | +.49 |
| % in-Migrants from cities, 2001–2006 | | +.09 | +.28 | +.38 |

All shaded cells $p \geq 0.001$.

**Table 6**
Predictive model of amenity, internal migration and 'creative class' presence, south-eastern and -western Australia, 2001–2006, linear regression (backwards elimination version).

| | Creative occupations, 2006 (no.) | Creative occupations, 2006 (% of workforce) |
|---|---|---|
| Irrigation resources | .07 (x) | .01 (x) |
| Settlement history | .03 (x) | .08 |
| Beach proximity | .06 (x) | −.04 (x) |
| Tourism & related services employment | .00 (x) | .42 |
| Median slope | −.19 | .08 |
| Altitude range | .23 | −.00 (x) |
| Accessibility[a] | .11 | −.05 (x) |
| Median rainfall | .00 (x) | .01 (x) |
| 2001–2006 net migration | .13 | .00 (x) |
| % Exurban in-migrants | −.00 (x) | .04 (x) |
| 2001 Rural density[b] | .35 | .33 |
| H/hold incomes, >$2500/wk (2006) | .23 | .18 |
| ABS (2006)[c] | .04 (x) | .15 |
| *Model summary* | | |
| $R$ | .65 | .78 |
| $R^2$ | .42 | .61 |
| $F$ | 58.45 | 125.64 |

(x) Denotes variable eliminated from the model during testing.
Shaded cells $p = < 0.001$.
[a] Derived from ARIA (GISCA, 1999).
[b] No. of occupied dwellings/100 sq km.
[c] Index of social disadvantage.

At the core of this paper is a concern to investigate the hypothesised stimulatory impact of the 'creative class' on local economic development. In the following section, we model the relationships between the level of local creative class presence – now treated as an independent variable – and local business and employment change. To do this, we use linear regression (backwards elimination) to test the separate influence of creative class employment on business and employment change during the late 2000s, controlling for a range of key independent factors. The independent and dependent variables included in the model are shown in Table 7, as are the results of this testing.

Reading across the bottom of Table 7, it is clear that the model acts as quite a powerful predictor of business numbers across rural south-western and -eastern Australia, explaining, in a statistical sense, sixty per cent of the variance in business numbers in the 2000s. However, the model's predictive power declines substantially once it is tested against more disaggregated measures of business and employment performance and structure. Importantly, it appears to be quite strongly associated with total community employment change (2001–2006) ($R = .54$, $R^2 = 29$, $p \geq 0.001$). Here, though, it is vital to examine in more detail the inner workings of the model to establish which variables had the greatest influence on local economic development conditions.

First, it is clear that the creative class occupation variables – particularly the number of 2006 creative workers – had the greatest influence on business numbers. Strangely, the rate of change in creative workers over the 2001–2006 intercensal period is negatively related to firm numbers. This suggests that where

**Table 7**
Predictive model of business and employment change, linear regression (backwards elimination version).

| | Business nos., 2003–2007 ($\beta$) | Business nos., 2007–2009 ($\beta$) | % Change businesses, 2003–2009 ($\beta$) | % Bus. with zero employees, 2009 ($\beta$) | % Bus. with 1–19 employees, 2009 ($\beta$) | % Bus. with 20–50 employees, 2009 ($\beta$) | % Bus. with 50+ employees, 2009 ($\beta$) | % Change in total employment, 2001–2006 ($\beta$) |
|---|---|---|---|---|---|---|---|---|
| Creative occupations, 2006 | .75 | .75 | −.09 (x) | −.26 | .18 | .18 | .17 | .01 (x) |
| % Change creative occs., 2001–2006 | −.09 | −.09 | −.22 | −.01 (x) | .07 (x) | −.10 (x) | .05 (x) | .09 |
| Irrigation resources | −.00 (x) | −.00 (x) | .10 | .03 (x) | −.07 (x) | .06 (x) | .15 | .00 (x) |
| Settlement history | .04 (x) | .04 (x) | −.10 | −.05 (x) | .10 | −.02 (x) | −.12 | .00 (x) |
| Beach proximity | −.10 | −.10 | .05 (x) | .05 (x) | −.09 (x) | .02 (x) | −.13 | .21 |
| Tourism & related services employment | .07 | .08 | .19 | −.07 (x) | .04 (x) | .01 (x) | .15 | .06 (x) |
| Median slope | −.26 | −.26 | .06 (x) | .06 (x) | −.02 (x) | −.14 (x) | −.13 | −.03 (x) |
| Altitude range | .18 | .17 | .00 (x) | −.03 (x) | .07 (x) | .03 (x) | .12 | .03 (x) |
| Accessibility[a] | −.03 (x) | −.02 (x) | .12 | .08 (x) | −.16 | .03 (x) | −.03 (x) | .08 (x) |
| Median rainfall | .18 | .18 | −.07 (x) | −.05 (x) | .02 (x) | .13 | −.20 | .08 (x) |
| 2001 Rural density | .01 (x) | .02 (x) | −.07 (x) | −.10 (x) | .15 | −.15 | .15 | .30 |
| H/hold incomes, >$2500/wk (2006) | −.05 (x) | −.05 (x) | −.03 (x) | −.05 (x) | .01 (x) | .07 (x) | .07 (x) | .09 |
| SEIFA (2006)[b] | −.04 (x) | −.03 (x) | .07 (x) | .14 | −.14 | −.06 (x) | −.07 (x) | .01 (x) |
| *Model summary* | | | | | | | | |
| $R$ | .78 | .77 | .26 | .27 | .26 | .20 | .39 | .54 |
| $R^2$ | .60 | .60 | .07 | .07 | .07 | .04 | .15 | .29 |
| $F$ | 87.39 | 85.83 | 6.04 | 15.94 | 5.18 | 4.12 | 7.75 | 41.47 |

(x) Denotes variable eliminated from the model during testing.
Shaded cells $p = <0.001$.
[a] Measured using ARIA.
[b] Index of social disadvantage.

there has been growth in the number of creative workers they have, by and large, been recruited to existing larger firms, with relatively few involved in independent business start-ups. Most of the amenity factors included in the model had little impact on the dependent variable, with the exception of the two terrain variables and median rainfall. Importantly, the creative class variables had no influence on total employment growth or decline between 2001 and 2006, with all being excluded from the final regression model (Table 7). In this case, the strongest single predictors of local labour force change were the more traditional locational/environmental and economic variables of rural population density and beach proximity.

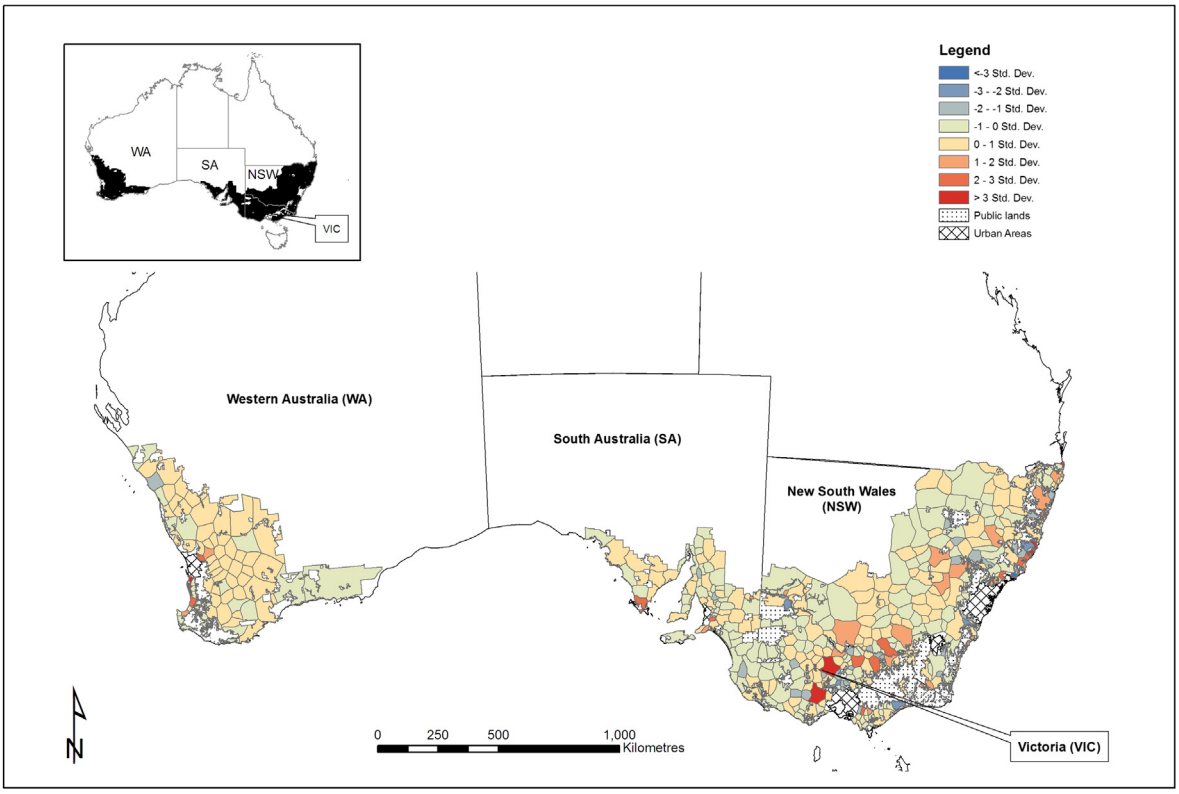


**Fig. 3.** Residuals from linear regression of creativity/amenity model on rural business numbers, 2009, south-eastern and -western Australia.

To gain a better understanding of the explanatory power of this final model, the residuals from the linear regression between the full predictive model and 2009 business numbers were mapped and analysed (Fig. 3). Not surprisingly, given the size of R and $R^2$, most of the study area falls within one to two standard deviations of the mean residual. The model under-predicts the association in a small number of communities (shaded dark blue, in the web version, in Fig. 3) generally located within the peri-urban fringes of capital cities or the coastal belt. Conversely, the model's 'fit' is over-predicted across a larger number of communities centred on relatively rapidly growing major regional cities (shaded in red, in the web version).

## Discussion and conclusion

In the face of deep-seated structural changes and challenges, many Australian rural communities are seeking a 'creative turn' as a means of stimulating economic development and reversing deteriorating local business performance and employment opportunities. Indeed, creativity is increasingly woven into the development discourse of regional development authorities, local councils and government agencies, with numerous high profile case studies offered as examples of communities that were able to 'turn the corner' on the back of the creative class. One of the other characteristics of most of these exemplars is that they are situated in high amenity, accessible environments. Indeed, our analysis of the ecumene of southern Australia shows that creative workers are more likely than the general population to be attracted to rural areas offering diverse physical landscapes and gentrified socio-economic and cultural settings. Moreover, our analysis indicates that population density is also important, suggestive of the need for a particular 'critical mass' of economic and socio-cultural activity to attract this type of worker. This is largely consistent with the findings of McGranahan and Wojan (2007) in the United States, where creative workers tended to be drawn to some of the most attractive parts of the countryside and, in particular, to those within which opportunities for active lifestyles abound. Their research also suggests that the presence of creative occupations is positively associated with employment growth in rural areas. It is here that the Australian example differs somewhat from the North American experience.

While simple correlation analyses indicate that a relationship exists between the creative class and net migration, when other variables are incorporated a more complex picture begins to emerge. One of the most apparent findings from the multiple regression model was that creative workers tended to have relatively little stimulatory effect on local economies as measured by employment growth. The model for employment growth was relatively robust, and indicated that the main drivers of growth were proximity to the beach and population density. This is suggestive of a form of job growth associated with coastal amenity, with the combination of high incomes and population density also stimulating an expanding labour force. The model for business growth was weak (with an $R^2$ of just .07), although the change in the number of creative workers in 2001 and 2006 did offer some insights into the change in the number of businesses between 2003 and 2009. The only other variable that was significant was tourism and related employment. This suggests that, while the local presence and/or number of the 'creative class' might have some impact on business growth, this effect is not large and is similar to the impact of a range of other sectors. Overall, the results of the multiple regression analysis indicate that creative workers tend not to have a substantial direct stimulatory effect on rural economies. This is not to say that there is no effect, but that the effects may be quite subtle, operating as second- or third-order effects and therefore not easily detected within our model.

Overall, this analysis raises important questions about the wisdom of rural development strategies that overemphasise the value of creative workers in stimulating economic development. While creative workers are certainly attracted to amenity localities, building development strategies around their purported economic growth potential seems unlikely to yield major gains in local employment or business numbers directly. Instead, more traditional landscape and locational variables are most likely to drive growth. This means that a focus on land use planning, environmental protection, and accessibility might lead to greater benefits than those likely to be achieved by a narrower 'creative workers' development strategy. Instead, creative workers need to be seen as one of a number of occupational groups that are colonising rural spaces. In this respect, they remain an important component of rural revitalisation, but we would argue that they do not necessarily warrant special attention in terms of economic development. However, this is not meant to downplay the real and potential importance to rural communities of attracting and retaining creative, entrepreneurial and innovative people. As outlined earlier in this paper, many communities benefit from attracting creative workers not simply on the basis of their economic potential, but for a range of less tangible socio-cultural reasons. Thus, in terms of maintaining or improving social structures, community cohesion and the development of external networks such strategies might be perfectly legitimate. Yet, we would also point out that, in the rural Australian context, just how these groups are reshaping their local political, social and cultural structures is largely unknown.

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