The economic and social embeddedness of family farms in local economies

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Agriculture in rural regions: What do we know? What don’t we know?

- Long-standing official data sets: Population, Production and Planning
- Emergent data sets: NRM, land use mapping, especially water and native vegetation. Australia National Land & Water Audit – completed 2008. The Australian Collaborative Land Use Mapping Program (ACLUMP): an element of this. (The railway gauge problem meets spatial data... project of definitional consistencies for land tenure across jurisdictions.)
- Latent data sets: socio-economics of land ownership
- Ad hoc constructed data sets: economic and social processes within rural regions.
Why the new data frontier?

- We need more complex models of the economics of rural space.
  - A fracturing in the coincidence of farms as household units, situated on single contiguous land units.
  - More diversity in the commercial ways that farm enterprises are organised and operate in their regions.
Farmer Joe
(wife, sons to inherit the farm, daughters to marry the sons of the neighbouring farmers)

Local town
Farmer Joe Block A
(family and succession characteristics?)

Farmer Joe Block B
(owned jointly with son)

Farmer Joe Block C
(owned through multi-person partnership)

Farmer Joe Block D
(owned through multi-person partnership)

Farmer Joe Block E
(leased to Fred Farmer)

Local town

Regional centre

Contractual arrangements?
Land titles data – only in the past few years has digitisation enabled systematic assessment of spatial and temporal changes in land ownership arrangements.

Data custodians traditionally played administrative, not strategic, roles.

Currently, no authoritative data exists that measures the rates at which agricultural land is changing hands, and by extension, potentially being consolidated or fragmented.
Lot: smallest land title entity

Property: land title entity representing a legal accumulation of lots

Holding: accumulation of lots in an LGA, defined by land ownership

Establishment: smallest accounting unit of business; covers all operations at a physical location, may consist of a group of locations provided they are in the same shire

Enterprise: accumulation of establishments

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This differs the ABS definition of ‘area of holding’ which also considers land that is leased or rented
Consolidation

Change in Ownership

Consolidation

Existing Holding

No change in ownership

Change in Ownership

Existing Holding

Mr X

Mr B

Mr X

Mr B

Mr B

Mr B

Mr X

Mr X

Mr B
Change in Ownership

Fragmentation (downsizing)

Existing Holding

No change in ownership

Change in Ownership

Fragmentation

Mr X

Mr B

Mr B

Mr B

Mr B
Pilot Study
Lachlan Shire

- Condobolin (main town in the Shire) is located 463km west of Sydney

- Population 6670 (Census 2006)
  7188 (Census 2001)

- Broad-acre grazing and cropping is the dominant type of agriculture. 450mm annual average rainfall.
Pilot Study
Mid Western Regional

- Located 250km from Sydney
- Approximately 9000 sq km
- Population 21,085 (Census 2006)
  21,356 (Census 2001)
- Recent amalgamation of Mudgee, Rylstone & Merriwa lga’s
- Average annual rainfall 650mm; diverse agricultural base including beef and horticulture (wine grapes)
Preliminary Results
Change in Holding Ownership
2000 - 2002

<table>
<thead>
<tr>
<th>Change (Ha)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>104,459</td>
<td>7.35</td>
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</table>

<table>
<thead>
<tr>
<th>Change (No.)</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>136</td>
<td>12.25</td>
</tr>
</tbody>
</table>

Legend
- Change
- No Change
- Surrounding LGAs
<table>
<thead>
<tr>
<th>Change (Ha)</th>
<th>Change (Ha)</th>
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<tr>
<td>112,248</td>
<td>7.9</td>
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<table>
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<tr>
<th>Change (No.)</th>
<th>Change (%)</th>
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<tbody>
<tr>
<td>110</td>
<td>10.11</td>
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**Legend**
- Orange: Change
- Green: No Change
- White: Surrounding LGAs
## Preliminary Results

### Change in Holding Ownership 2004 - 2006

<table>
<thead>
<tr>
<th>Change (Ha)</th>
<th>Change (%)</th>
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<tbody>
<tr>
<td>129,718</td>
<td>9.12</td>
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<table>
<thead>
<tr>
<th>Change (No.)</th>
<th>Change (%)</th>
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<tbody>
<tr>
<td>144</td>
<td>12.87</td>
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#### Legend
- **Change**
- **No Change**
- **Surrounding LGAs**
**Mid Western Preliminary Analysis**

**Change in Holding Ownership 2005 – 2006**

<table>
<thead>
<tr>
<th>Change (ha)</th>
<th>Change (%)</th>
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<tbody>
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<td>29008.46</td>
<td>4.12</td>
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<table>
<thead>
<tr>
<th>Change (No.)</th>
<th>Change (%)</th>
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</thead>
<tbody>
<tr>
<td>358</td>
<td>8.99</td>
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**Legend**

- Change
- No Change
- Surrounding LGAs
Change in Holding Ownership
2006 – 2007

<table>
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<th>Change (ha)</th>
<th>Change (%)</th>
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<td>37526.82</td>
<td>5.35</td>
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<table>
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<tr>
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<th>Change (%)</th>
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<tbody>
<tr>
<td>308</td>
<td>7.71</td>
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Legend

- Red: Change
- Green: No Change
- Surrounding LGAs
Mid Western Preliminary Analysis

Change in Holding Ownership
2007 – 2008

<table>
<thead>
<tr>
<th>Change (ha)</th>
<th>Change (%)</th>
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<tbody>
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<td>52435.29</td>
<td>7.61</td>
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<table>
<thead>
<tr>
<th>Change (No.)</th>
<th>Change (%)</th>
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<tr>
<td>353</td>
<td>8.77</td>
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</table>

Legend
- Change
- No Change
- Surrounding LGAs
### Fragmentation & Consolidation 2005 – 2006

<table>
<thead>
<tr>
<th>Change</th>
<th>Fragmentation</th>
<th>Consolidation</th>
<th>Fragmentation &amp; Consolidation</th>
<th>Surrounding LGA’s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.21% (No.)</td>
<td>39.12% (Ha)</td>
<td>22.35% (No.)</td>
<td>26.31% (Ha)</td>
</tr>
<tr>
<td></td>
<td>6.98% (No.)</td>
<td></td>
<td>12.04% (Ha)</td>
<td></td>
</tr>
</tbody>
</table>

**Surrounding LGA’s:**
- Gulgong
- Mudgee
- Rylstone
The ultimate aim is to develop comparison data over time and space on:

- The size, contiguity and dispersal of farm holdings;
- Spatial patterns of ownership change, consolidation and fragmentation;
- A model that explains the impacts of individual key factors (e.g., climate variability) on rates of change.
The regionality of farm expenditure;
Despite various input-output modelling projects across the country, no authoritative data on the extent of localness in farm expenditures, and why.
115 completed interviews for the General Farm Business Questionnaire (GFBQ): Nthn Tablelands 51.3%; Lachlan 48.7%.

51 completed the Farm Financial Questionnaires: Nthn Tablelands 56.8%; Lachlan 43.2%
Considerable local leakage in household spending
## Farm business recurrent expenditure: Lachlan

<table>
<thead>
<tr>
<th></th>
<th>Condobolin</th>
<th>Lake Cargelligo</th>
<th>Other Lachlan Shire</th>
<th>Total Lachlan Shire</th>
<th>Outside Lachlan Shire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeds</td>
<td>47.59%</td>
<td>7.00%</td>
<td>32.33%</td>
<td>86.92%</td>
<td>13.08%</td>
</tr>
<tr>
<td>Agronomy Services</td>
<td>16.84%</td>
<td>0.00%</td>
<td>63.97%</td>
<td>80.81%</td>
<td>19.19%</td>
</tr>
<tr>
<td>Contract harvesting</td>
<td>46.92%</td>
<td>0.00%</td>
<td>6.88%</td>
<td>53.80%</td>
<td>46.20%</td>
</tr>
<tr>
<td>Pasture establishment</td>
<td>42.01%</td>
<td>17.40%</td>
<td>30.88%</td>
<td>90.30%</td>
<td>9.70%</td>
</tr>
<tr>
<td>Drenching</td>
<td>32.91%</td>
<td>7.14%</td>
<td>56.40%</td>
<td>96.45%</td>
<td>3.55%</td>
</tr>
<tr>
<td>Fodder</td>
<td>96.63%</td>
<td>0.00%</td>
<td>1.43%</td>
<td>98.05%</td>
<td>1.95%</td>
</tr>
<tr>
<td>Vet services</td>
<td>44.48%</td>
<td>0.00%</td>
<td>27.34%</td>
<td>71.81%</td>
<td>28.19%</td>
</tr>
<tr>
<td>Other</td>
<td>40.65%</td>
<td>2.05%</td>
<td>31.96%</td>
<td>74.65%</td>
<td>25.35%</td>
</tr>
<tr>
<td>Fuel</td>
<td>4.19%</td>
<td>10.13%</td>
<td>69.72%</td>
<td>84.04%</td>
<td>15.96%</td>
</tr>
<tr>
<td>Equipment maintenance</td>
<td>67.42%</td>
<td>9.49%</td>
<td>22.50%</td>
<td>99.41%</td>
<td>0.59%</td>
</tr>
<tr>
<td>Water</td>
<td>96.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>96.00%</td>
<td>4.00%</td>
</tr>
<tr>
<td>Freight</td>
<td>21.20%</td>
<td>0.00%</td>
<td>12.81%</td>
<td>34.01%</td>
<td>65.99%</td>
</tr>
<tr>
<td>Total</td>
<td>42.89%</td>
<td>6.84%</td>
<td>35.92%</td>
<td>85.65%</td>
<td>14.35%</td>
</tr>
</tbody>
</table>
Apparent high degree of local ‘stickiness’ in farm business expenditures, belies the general trend for leakage in household expenditures to larger centres in urban the hierarchy.

Underlines the ongoing importance of local towns in the rural landscape, notwithstanding the obvious problems they face.
The rural economy is dynamic, and to understand its changing character, we need new data sets, and new terminologies, that seek to understand the transformed ways that farms and farm production are organised spatially.