

## ***Matching Rural Needs and Policy Symposium***

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### ***The Economics of the Rural Sector***

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#### ***Abstract***

*This paper analyses empirical data from the rural sector and concludes that the economic dislocation confronting rural Australia is the consequences of on going sectoral realignment of an agricultural sector as an economy matures over time. This can be theoretically explained by reference to Engle's Law and industry supply and demand theory.*

*Agricultural policy based upon economic efficiency and productivity objectives will compound problems of structural realignment. Indeed they are incompatible with sectoral stability if productivity gains result in expanded sectoral output which must be sold in corrupt and unstable world markets.*

*Problems associated with rural sectoral realignment have been compounded by a drought of historic proportions over the early 1990s. The drought is commonly identified as the cause of sectoral dislocation. It is not, and the underlying structural problems will remain after the drought has ceased.*

*A complete change of direction is required for rural policy. Economic development of the sector as an integral part of the Australian economy must be the objective. Past policy directed to survival of commodities must be discarded in favour of ones that will stabilise rural regions, communities and sectors.*

## The Economics of the Rural Sector

*Ben Rees*

The problems of the rural sector are gradually emerging as a focus for policy debate across the community. Until recently, the rural policy debate had followed faithfully the current economic orthodoxy of economic rationalism which has sought to move the rural sector along with the wider economy to some long term sustainable growth path that will restore profitability and rising living standards. The obvious failure of economic rationalism to deliver is observable across the economy in unacceptable levels of unemployment, rising poverty, a rust belt for a manufacturing sector, and a debilitated rural sector.

A.B.A.R.E. International Rural Commodity Price Index measured in S.D.R. values collapsed by 39% between 1988-89 and 1992-93<sup>1</sup>. The commodity price collapse has been compounded by a protracted drought over the early 1990's which moved rural Australia to a crisis situation not seen since the Great Depression. The significance of the international commodity price collapse is that it signalled substantial international overproduction of agricultural commodities on world markets. The effects have been severe upon the major Australian export industries of wool and wheat with beef affected after 1993.

International oversupply of beef occurred later for the cattle industry. The average saleyard price of cattle remained positive until 1993; but, began to soften in September of that year from around 135 cents live weight. By June 1996 saleyard prices were reported as low as 20 cents live weight; but, were consistently reported from the high 40 cents to 90 cents per kilogram. If an average price is assumed to be 75 cents, then from September 1993 to mid 1996 saleyard cattle prices fell between 40% to 45%. This week there are indications that the bottom of the price cycle might have been reached. Even if the price level has bottomed, it will be some time before it returns to a level which generates profit and confidence within the cattle industry.

Between 1988/89 and 1990/91 the unit price of wheat per ton fell from \$ 212 to \$132<sup>2</sup> which represents a fall of 37.7%. The price of wheat has recovered enough in 1996 to encourage large plantings by both specialist grain growers and opportunity growers moving from the depressed beef and wool industries. This represents a transfer of farm land and capital or factor transfer between industries. Factor transfer has been identified as a feature of the rural problem contributing to sectoral instability and the accumulation of debt<sup>3</sup>. It is driven by expectations of returns in alternative production options. The role of expectations<sup>4</sup> in farm decision making is central to understanding factor transfer within and across rural industries.

Between 1988/89 and 1992/93, the price of wool fell by 51.6% ; and, in 1996 still remains stubbornly below the cost of production. For the wool industry, the price collapse has been of greater magnitude than occurred during the Great Depression<sup>5</sup>. Major problems confronting the wool industry are twofold. Firstly, the contraction of consumption within the textile consuming countries of the Sino-Soviet group from 1988 onwards requires the industry to find a replacement consumer; or, a technological breakthrough that will allow wool to be used in mass consumption fabrics such as cotton in the jeans market. A change in consumer preferences away from wool also presents the industry with major concerns.

The rural sector has accumulated an historic level of debt which is becoming unserviceable because of the rural depression caused by the commodity price collapse. The recent National Rural Finance Summit is evidence of political and industry concern over this problem. However, farm debt is no recent phenomena. Analysis of time series data confirms farm debt began to build over the latter years of the 1970's<sup>6</sup>. Towards the end of the 1970's farmers had begun to use credit as a form of risk management to augment farm income flows and capitalise on profitable opportunities in alternative resource use patterns<sup>7</sup>; and, also to achieve structural adjustment objectives to enhance farm efficiency and productivity. The protracted drought across eastern Australia from the early 1990's has added a new dimension to the level of rural debt.

The combined consequences of these factors impacting upon rural Australia have led to a questioning of current economic orthodoxy. It has failed to provide solutions of substance to the dislocation confronting the rural sector. Consequently there has emerged a debate over the future direction of the rural sector and its role in the Australian economy. Three groups appear to be crystallising within the debate. Firstly there are the proponents of economic rationalism who continue to pursue market economic policy objectives which demand: balanced budgets, microeconomic reform, internationally competitive industries, free

international trade across the economy ;and; for the rural sector special attention is given to: rural adjustment ,education and training and financial services. This group has lost credibility and support at grass roots level where the impact of their policies are experienced first hand. Nonetheless, they still dominate the rural policy agenda at institutional and political levels, and across the media.

A second large group recognises that economic rationalism has failed to deliver; but, do not understand the forces that are driving the relative decline of the rural sector. These people are angry and desperate for help. They tend to lash out at anyone and everyone that they feel has contributed to the rural crisis: banks, finance institutions, political parties, economists, and industry leaders. This group comprises a confused collection of people amongst which there are "instant experts" and "believers in community empowerment". Their particular focus is on symptoms of the crisis rather than identifying the cause. Their solutions would mean further fragmentation of rural communities within the sector.

A third group is gathering momentum and credibility in the rural debate. This group centres around informed debate founded on contemporary research and analysis of time series data from the rural sector. Their analytical approach has led to a questioning of the theories and modelling methodology of the current economic orthodoxy. They argue for rural policy that will promote development of regions and communities and achieve sectoral stability and economic and social integration with the wider economy. Such a policy direction would incorporate environmental considerations directed to maintenance of the resource base and sustainable agriculture. This approach directly challenges the theories and tenants of economic rationalism as non- market phenomena such as land degradation is excluded from economic analysis by definition.

The purpose of this paper therefore is to use contemporary research to formulate a theoretical framework from which there can develop an informed debate over rural policy. The structure of the discussion will be to identify the problem of the sector as one of relative structural realignment within the wider economy. It will be demonstrated from a theoretical base that this is an ongoing phenomena in a mature economy; and, one that will not lend itself to sterilisation by the underlying assumptions of economic modelling required when the economy arrives at the point of general equilibrium across all markets from which no economic agent desires to move<sup>8</sup>.

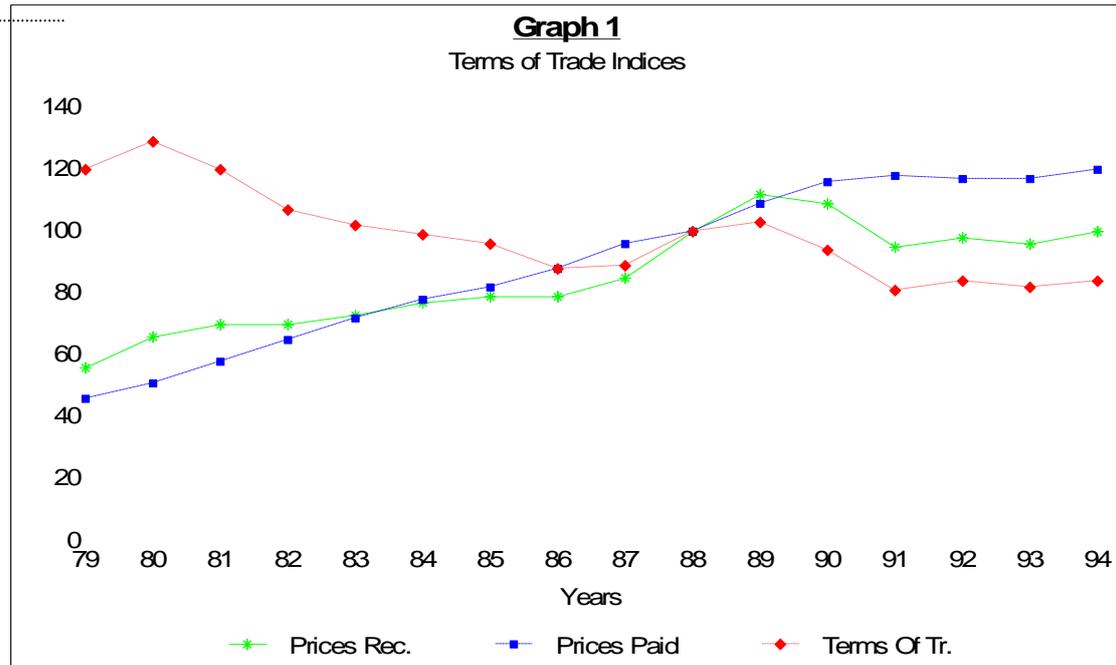
### *1 Sectoral Realignment*

**Table 1: Selected Data: Rural Sector 1950/51--1993/94**

Year	%. G.D.P.	% Total Exports	% Total Employment	Price Indices		Terms of Trade Index	C.P.I. Index
				Rec	Paid		
1951	26.1	85.3	n/a	28	11	252	12
1955	14.2	75.8	n/a	27	12	230	13
1960	11.3	67.7	n/a	26	17	196	16
1965	10.5	63.4	9.4	27	16	173	17
1970	6.7	44.3	7.7	26	17	145	20
1975	5.5	38.2	6.5	38	30	125	31
1980	5.9	38	6.1	66	51	129	52
1985	4.0	29.5	5.7	79	82	96	79
1990	3.7	24.1	5.1	109	116	94	116
1994	3.2	21	4.9	100	120	84	128

A.B.A.R.E Commodity Statistical Bulletin 1994 p.p. 2,5,8,19

Table 1 provides an empirical overview of the sectoral realignment within the Australian economy of the rural sector. Relative sectoral contributions across all important variables have declined over time. The long term decline in the rural industry terms of trade provides the key to understanding the structural realignment of the rural sector in the Australian economy. Agricultural policy pursuing efficiency and improved productivity objectives has failed to reverse the fortunes of the rural sector in the national economy.



Compiled from A.B.A.R.E. Commodity Statistical bulletin 1994, p. 19

The terms of trade is the ratio of prices received to prices paid. Graph 1 demonstrates the terms of trade decline from 1979 to 1994. However, A.B.A.R.E. published industry terms of trade data base used is from 1951-52 to 1993-94. In 1951-52 the index value stood at 252 which has declined to 84 in 1993-94. This represents an annual decline of 2.6% over the forty two years of data.. In the graph from 1989 onwards this phenomena is clearly identified by the falling gradient of the prices received curve to 1991 whilst the prices paid curve levels out. It is the gap between these two curves which represents the industry terms of trade problem.

## 2 Terms of Trade

Industry terms of trade are defined as the ratio of prices received to prices paid. This section identifies the importance of industry terms of trade on the relative economic performance of the farm sector within the Australian economy between 1951-52 and 1993-94.

### 2.1 Empirical Analysis of Time series Data

**Table 2: Selected Industry Data**

Year	Gross vale Production \$m	Costs \$m	Net Value Production Index	Prices Received Index	Prices Paid index	Rural Debt \$m	Terms of Trade. Index
51/52	1924	977	222	28	11	na	252
59/60	2646	1639	182	26	13	974	196
69/70	3730	2668	151	26	17	2082	145
79/80	11778	7761	217	66	51	3769	129
89/90	23804	20353	84	109	116	12023	94
93/94	23646	20100	78	100	120	16282	84

Source: A.B.A.R.E. Statistical bulletin 1994 p.19; R.B.A. Statistical Bulletin Financial Supplement, March 1981,p.115; and R. B.A. Bulletin; Dec. 1995, p.S 62

The changed relativities between the Prices Received and Prices Paid Indices demonstrates the long term decline in sectoral profitability. For example in 1951-52, the Prices Received Index value was 2.5 times that of the Prices Paid Index; but, by 1993-94, the Prices Paid Index was 1.2 times the value of the Prices received index. Viewed from another perspective, costs as a percentage of gross value of production in 1951-52 were 50.7% ; but, in 1993-94 they comprised 85%

Prices received rose over time by 3.1% compound whilst prices paid increased by 5.9% annually. This failure of prices received to maintain relativity with prices paid implies price inelasticity of demand for agricultural production. Further confirmation of price inelasticity of demand can be inferred also from the relative price movements across the wider economy expressed in the C.P.I. Index rate of change of 5.8%.

The relative change in prices received for agricultural output was 53.4% of other prices movements across the economy measured by the C.P.I.. Comparatively, prices paid for agricultural inputs rose marginally faster than prices in the wider economy to measure 101.7%. of C.P.I. movements. From these relative price movements, it can be inferred that the farm sector is not in a position to exercise any market power in the markets for agricultural output. On the other hand , the change in the prices paid index being marginally higher overall than the C.P.I. change suggests that market power could be a feature in the markets for farm inputs.

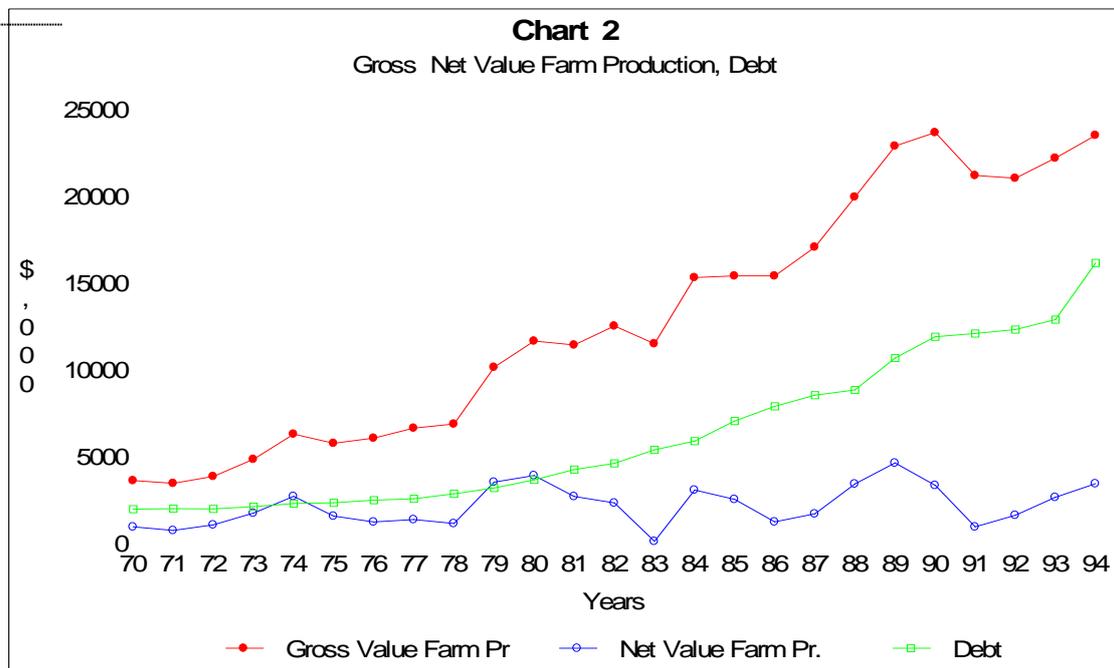
**Table 3: Analysis Farm Data in Table 2**

<u>Correlation Statistics</u>	
1951/52 - 1993/94	
* Costs/ Gross Prod.	0.99
Terms of Trade/ gross Prod.	-0.8
Gross Prod./ Debt	0.96
Terms of Trade/ Debt	-0.81

Notes: (1) Calculations are base upon complete data from A.B.A.R.E. and R.B.A references.

\* (2) Cost/gross production basis is Farm Cost \$m; and, not the Index of Prices Paid

Table 3 correlation analysis of time series data suggests that important relationships exist across farm costs, production, and debt. The correlation statistics suggest that costs drive production which in turn is debt financed. In other words, as profitability is eroded through terms of trade phenomena, production expands to maintain farm viability. Because farm profitability has been eroded, any expansion of farm production must rely on credit funding.



Compiled from A.B.A.R.E. Commodity Statistical Bulletin 1994 ,p.19 ;and various R.B.A. Bulletins Rural Debt

Graph 2 illustrates the relationships across gross farm production , net farm production and debt. The difference between gross farm production and net farm production is another perspective of the terms of trade phenomena. The flow of income and wealth produced by the farm sector to the wider economy

is clearly visible as the widening gap between gross farm production and net farm production. The increasing flow of production to the wider economy from the late 1970's is clearly visible as is the growing incidence of debt

The other side of this problem is demonstrated by the Net Value of Farm Production Index values of 222 in 1951-52 falling to 78 in 1993-94 ( Table 2). The purchasing power of the net value of farm production has declined at the annual rate of 2.5% annually even though the current value has increased by 3.2% annually from \$947m in 1951-52 to \$ 3546m in 1993-94. The erosion of purchasing power over time has meant that productivity and efficiency gains had to be pursued to maintain farm viability. Credit was necessary to augment declining farm purchasing power to rearrange farm resources and fund structural adjustment. The growing reliance upon debt finance is clearly evident in Chart 2 from the late 1970's onwards; and, is consistent with the correlation statistics in Table 3.

At industry level factor transfer and factor expansion of both land and capital have been necessary to achieve productivity and efficiency gains through increasing farm size, applying technology ,expanding farm output, and maintaining incomes<sup>9</sup>. Factor expansion of capital and land first identified in the 1970's has continued into the 1990's<sup>10</sup>; and, appears to have become a form of risk management strategy. The practise is evident in 1996 as farmers move factors of production from sheep and beef to wheat in an attempt to capitalise upon expectations of relative profit opportunities in growing wheat.

The decade of greatest absolute debt increase was during the 1980's rising at an annual compound rate of 12.3%. The real growth rate of farm production for the decade was 2% whilst input costs increased by 8.6%. Prices received rose by only 5.1%. This means that farm profitability was placed under more pressure over decade of the 1980's than the decade of the 1970's which is generally regarded as the worst post war period of costs pressures. The reality was that over the 1970's input costs rose by 11.6% per annum whilst prices received increased by 9.8%. The relative differentials between prices received and prices paid illustrate the comparative situations between the two decades: 1970's = -1.8% ; 1980's = -3.5%

An increasing exposure to credit during the 1980's was inevitable given the erosion of farm profitability through prices received and prices paid relativities. This also explains the preoccupation of farm lobby groups with cost reduction policies through microeconomic reform. Nonetheless, cost reduction has limited opportunities as a policy direction to restore farm profitability and sectoral stability. It is only one component of industry terms of trade. The other more important variable is prices received.

## 2.2 *Efficiency and Productivity*

Current agricultural policy is based upon general equilibrium theory and modelling<sup>11</sup> from which there derives the belief that removal of market impediments through microeconomic reform will restore prosperity to the rural sector<sup>12</sup>. A major assumption used in general equilibrium modelling is that markets clear in the long run. This assumption implicitly contains the late eighteenth century Say's Law which states that supply creates demand. It also contains the proposition that the market clearing price will recover costs and include a normal profit. It is a particularly important assumption because from it flows the unrealistic proposition that there can never occur a failure of demand. Thus, there can be unlimited production or supply which will always sell without economic loss at whatever price clears the market.

From the market clearing assumption flows the theoretical basis of the microeconomic reform agenda and the efficiency and productivity solution. If the markets do not clear, then there exist market impediments which prevent the free flow of market forces. These impediments create bottleneck situations which reflect inefficient resource allocation. The solution therefore is to pursue microeconomic reform allowing the automatic adjustment mechanism to function. Once markets are restructured to allow the unimpeded operation of the market mechanism the rationale of the productivity solution is established.

The question not addressed in this policy direction is the impact upon the wider economy. For example, the proposed reforms to boost farm profitability largely represent a redistribution away from the wider economy to the farm sector. It has to be assumed therefore that the distributional consequence are costless. The reality of such a redistribution of income through balancing markets in general equilibrium economic models is most unlikely to be costless in the real world.

Underwriting the efficiency and productivity solution is the belief that profitability can be maintained under declining prices provided that productivity can be increased: "*Rising productivity lowers the unit cost of production and in competitive markets this lower cost will be reflected in lower prices. The business margin is unchanged*", Paul Brennan<sup>13</sup> N.F.F. 1995

Productivity increase is in general terms defined as an increase in output from a given level of inputs or a constant level of output produced from a reduced level of inputs. Thus the way in which productivity is achieved is particularly important for agricultural production because of the recognised price inelasticity of demand. Should productivity improvement result in output expansion, then over production becomes a real prospect for the farm sector; and, the increased output will impact negatively upon the price at which it can be sold.

In essence the efficiency and productivity thesis based upon general equilibrium modelling is about the balancing of markets in an economy operating under pure competition. Markets clear when all markets are in balance which means implicitly that policy is concerned with the relative prices in factor markets and the prices of goods and services as they flow through their respective markets. It follows therefore that agricultural policy so derived is about commodities and not the economic welfare of people and rural communities.

### **3 The Rural Sector A Theoretical Explanation**

*"Engle's Law states that as income grows, the demand for food grows less than proportionately. This is a Law of pervasive importance in economic growth, with profound side effects in such questions, for example, of the necessity for the political importance of farmers to decline with the passage of time".*  
C.P. Kindleberger, "International Economics", 1973<sup>14</sup>

The relative decline of the rural sectors contribution to the Australian economy can be explained theoretically as sectoral realignment of the food producing sector within an economy as it matures over time. The theoretical tools are readily available and are outlined in this section; and, comprise: Engle's Law and industry supply and demand theory.

Engle's Law explains the economic forces at work behind the long term decline of the rural industry terms of trade. In other words it explains the long term trend line of industry terms of trade whilst supply and demand theory explains business cycle phenomena in terms of oscillations around the long term trend line of the industry terms of trade. Together, Engle's Law and demand and supply theory comprise a theoretical analytical basis from which realistic agricultural policy can be formulated to meet the needs of the rural sector.

*Engles Law* is the result of empirical research which found that as incomes rise in a maturing economy, a decreasing budget allocation flows to food purchases. The operation of *Engles Law* can be demonstrated easily from Australian economic data. In 1949/50, the percentage of wages salaries and supplements spent on food was 34.3%. By 1989/90, it had fallen to 17.7%<sup>15</sup>. Implicit in Engles Law is the phenomena of a low income elasticity of demand for food and subsequently agricultural production. Thus it follows that as an economy matures over time, the food producing sector must decline relatively within the economy. It is a continual and ongoing phenomena.

*Supply and demand theory* explains price determination under market forces through the business cycle. There is an optimum price level determined in the market at the level of supply which equals the level of demand. From the price inelasticity of demand for food implicit in Engle's Law, it follows that production beyond equilibrium of supply and demand will be sold at prices which decline disproportionately to the increase in output.

Theoretically, these two phenomena make it possible to explain the relative decline of the rural sector over time. But, more importantly, they provide a framework of understanding from which agricultural policy can be developed that will stabilise the rural sector within the wider economy. For example, market policies directed to counter Engle's Law through efficiency and productivity solutions are exposed to the danger of perverse policy outcomes of promoting over production and declining sectoral population as technological application reduces the demand for labour.

#### **4 Theory and Reality**

The experience of the rural sector through the 1980's and 1990's can be demonstrated empirically to conform to expectations hypothesised under Engle's Law. For example, the percentage increase in wages salaries and supplements in the Australian economy increased from \$63 616m to \$ 184 432m or 189.9%. The expenditure on food in 1979-80 was \$ 12 083m and \$ 32 617m in 1989-90 or 170%. Viewed from another perspective, expenditure on food as a percentage of final consumption expenditure fell from 16.7% to 15.1%<sup>16</sup> or 9.6% decline.

For two and a half decades prior to 1979-80, the international supply and demand trend curves for food had increased at a stable equilibrium growth path of around 2.6% annually<sup>17</sup>. Between 1983 and 1994-95, according to the I.M.F. the supply of commodities "almost doubled"<sup>18</sup>. This means that over the period since 1983, the international supply of commodities grew at an annual compound rate of around 6% or 2.3 times the annual trend average for the two and a half decades prior to the 1980's.

Australia's major rural industries responding to an agricultural policy stance driven by efficiency and productivity objectives were exporting into international markets in which international supply was rising substantially faster than international demand. The major export industries did not experience conditions of market disequilibrium simultaneously. Wheat and wool both ran into difficulties during 1988-89 ; but, whilst wheat prices bottomed in 1990-91, wool did not bottom until 1992-93. Beef and veal on the other hand did not see prices soften until 1993 and saleyard prices did not collapse until 1996. By the middle of 1996, only wheat appears to have recovered to a level where prices are attractive enough to encourage large scale planting. However, the depressed prices of both wool and wheat no doubt have encouraged farmers to move into wheat wherever that option presents itself which in itself threatens the medium term wheat industry prospects unless one or both other major industries move back to profitability in the short term.

#### *Factor Transfer/Expansion*

Farmers respond to terms of trade or cost/price squeeze by moving resources into more profitable enterprise structures and industries<sup>19</sup>. Structural adjustment at farm level has been an established practise over the past three decades. Research published during the late 1970's identified that on wheat farms , enterprise size and tractor power had almost doubled during the decade to 1976-77<sup>20</sup>. Structural adjustment strategies at farm level take two approaches. Short term structural adjustment focuses upon rearrangement of existing combinations of farm resources whilst long term adjustment expanded farm size and increased the capital base.

In theoretical terms such phenomena constitutes factor expansion in one industry at the expense of factor contraction in another industry. Factor expansion of land occurs when idle land is brought into production or degraded land is reclaimed and made productive again. Expansion of the factor capital as a substitution for labour to contain costs has been a feature of agricultural production particularly from the early to mid 1970's when rural wages were brought more in line with wages paid in other sectors of the economy. Capital expansion takes place when technology is applied at the farm level ;for example, the switch from two wheeled drive to four wheel drive tractors, computerisation, etc..

#### **5 Rural Debt**

The role of debt finance to fund capital formation in agriculture is directly linked to farm incomes, consumption, savings and investment requirements. Because efficient agriculture relies on the uptake of technology, the use of debt finance plays a vital role. Published research during the 1970's recognised the role of credit as an essential management tool for the majority of Australian farmers<sup>21</sup>.

The application of debt finance varies between, farms and regions and responds to a range of enterprise situations<sup>22</sup>. For example, relative commodity price movements encourage producers to restructure farm resources ;and or, diversify into other industries. Carry on finance is also an important role of credit use under conditions of declining commodity prices and adverse seasonal conditions. These influences have been confirmed by recent empirical research from production and debt time series data between 1969/70 to 1993/94.<sup>23</sup>

## 6. Rural Adjustment

The current Rural Adjustment Scheme is an interest subsidy policy instrument which carries the requirement that applicants must be long term viable. Given the implications of the long term decline in the rural sector's terms of trade, any definition of long term viability must be by implication little more than someone's best guess or value judgement. It is highly likely that today's viable producer will be tomorrow's non-viable farmer.

An interest subsidy scheme can meet only part of market failure in rural credit markets by smoothing out gaps in financial resource flows (refer B.A.E. Study 1972). Such gaps would be expected to emerge in times of commodity price downturn or under adverse seasonal conditions. Under such conditions a rural credit market conforming to the criteria of pure competition would be unable to equate supply with demand at non-penalty market rates.

Early literature discussing the development of rural reconstruction (refer Baker 1973) considered interest subsidy programs to be regressive. Concessional finance tends to be rationed by wealth criteria rather than by market risk assessment. Thus they tend to promote wealth accumulation at the expense of taxpayers. Windfall gains can easily become the objective of successful applicants who capitalise accrued asset gains in times of commodity price recovery and favourable seasons. The long term decline in industry terms of trade become irrelevant in the real world of subsidised interest rates markets.

The original purpose of rural reconstruction as a policy instrument was to address the small farm/low income problem. Although it is possible to argue farm build-up provisions provide the opportunity for farm amalgamations, reality suggests a failure of the interest subsidy program to provide a solution to small farm/low income applicants faced with long term viability requirements. They are unlikely to attract a favourable response.

A major problem of small farm/low income amalgamation applicants is farm improvement duplication. A non-viable unit is faced with borrowing to purchase another operational unit even though it is in itself non-viable. Duplicated farm improvements do not assist in raising farm income; but, on the contrary impose a "dead weight" burden on the borrower.

Amalgamation of small farms becomes difficult unless adequate compensation grants are provided for those prepared to leave the land. The vendor of a small farm must be able to finance another home of acceptable comfort for his family in an urban area which offers real prospects of employment. Market value for the small farm based upon farm returns is unlikely to provide enough financial resources for this to be achieved.

In times of historically high unemployment amalgamation of small uneconomic units poses particular problems. Skill training for farmers leaving the industry simply increases pressure on unemployment queues in other areas. If a farmer is successful in gaining employment, it will be at the expense of some other unemployed person in another district, town or city. As at the end of the March Quarter 1996, there were 51,900 vacancies and 771,000 unemployed<sup>24</sup> and possibly that many again underemployed. Thus, adjusting non-viable farmers out of the industry simply transfers the problem of underemployment and unemployment to another sector of the economy. It is little more than "sweeping under the carpet" the wider problem of idle labour in an economy which is visible evidence of inefficient and underutilised resource application.

The existing Rural Adjustment Scheme is open to criticism as an instrument of policy to address the rural industry's structural adjustment needs of the 1990's. Firstly, it is open to exploitation and value judgements which do not sit well with the small farm/ low income problem. What appears to be happening in the real world is that prosperous farms are amalgamating with "plum" properties which have run into equity problems because of "over stretching" or commodity price collapse eroding cash flows. What is required is a policy instrument similar to the original rural reconstruction program because it has a more realistic application to the needs of a sector experiencing over the long term an irreversible decline in industry terms of trade. An interest subsidy program provides no realistic solution to long term industry sectoral realignment in an economy moving through time.

The policy issue of stabilising factor endowment should be a high priority of any rural reconstruction scheme. Rural producers moving factor endowments to other industries at times of industry downturn through debt finance has been demonstrated as a significant contributor to the historical level of debt currently overhanging the sector. Consequently debt reconstruction programs must form an integral component of any worthwhile reconstruction scheme. As it now stands rural adjustment interest subsidy assistance compounds the problems of the rural sector even though particular farmers are helped. Rural reconstruction should be directed therefore to the policy objectives of reconstructing small farms, stabilising factor endowment, and debt reconstruction.

## 7 Conclusion

Solutions to the economic dislocation confronting the Australian rural sector will require a complete reassessment of: firstly the role of rural Australia as the nation moves into the twenty first century, and secondly the structure of policy instruments to support the rural sector over time. Research of policy instruments employed in other mature economies such as "set aside programs" should be undertaken at the earliest opportunity. Set aside programs offer a means by which factor endowment can be stabilised in times of over production on world markets. Income support for rural producers prepared to withdraw land from production should be viewed as a public good on environmental grounds. Resource sustainability cannot be achieved if rural producers are incapable of profitable production at times of commodity price collapse.

A realistic rural reconstruction scheme needs to be developed which will compliment other policy instruments employed to deliver rural policy. The policy instruments should be developed with the objective of moving rural policy away from commodity survival to stabilising and developing the rural sector as an integral and vital sector of the Australian economy. This will require an attitudinal change in those responsible for policy development which must start as a questioning of an economic philosophy that has in every respect failed to deliver stability and prosperity to not only the rural sector; but, also the national economy.

There has to be a recognition of the need to use a range of analytical tools and methodology in developing rural policy. It has been demonstrated that Engle's Law and the theory of supply and demand offer a different analytical perspective from which to discuss rural sectoral decline. Indeed, they directly challenge the proposition of general equilibrium modelling that when an economy reaches general equilibrium across all markets there will be no incentive for economic agents to move from that point. In other words, both Engle's Law and the theory of supply and demand are suspended at equilibrium by the underlying assumptions of general equilibrium models.

The inappropriate theory of supply and demand postulated upon the assumption that all markets clear in general equilibrium modelling is of particular concern. It leads to erroneous policy conclusions because under this assumption derived from Say's Law there can never occur demand failure. It perpetrates the proposition that efficiency and productivity gains can solve the problems of industry terms of trade decline. In other words ongoing microeconomic reform will reduce costs provided market flexibly is allowed to deliver market clearing prices for inputs. The distributional consequences of this assumption are assumed to be costless.

Rural policy must move from balancing markets which ensures commodity survival to a policy direction of rural development. Time is fast running out for rural Australia and with it policies based upon economic models divorced from reality.

<sup>1</sup> A.B.A.R.E. Commodity Statistical Bulletin , 1994, p. 10

<sup>2</sup> A.B.A.R.E. Commodity Statistical Bulletin, 1994 p.222

<sup>3</sup> Rees, Ben, " Paradox of Plenty", Rebuilding Rural Australia Conference, hosted by Ernst Young and Q.U.T. Toowoomba Dec. 1995.

<sup>4</sup> Rees, Ben. "The Rural Problem and Policy Options", Rebuilding Rural Australia Symposium, hosted by Ernst & Young, Q.U.T., Miles Nov. 1994 p.15

<sup>5</sup> Rees, B.; Stanford, J ; "The Future Of The Rural Sector In The Queensland Economy", Queensland economic Forecasts and Business review", Q.U.T., March 1996, p.114

<sup>6</sup> Rees, Ben, " Paradox of Plenty", op.cit.

<sup>7</sup> Rees, Ben, Stanford, Jon, " Rural Policy Failure" unpublished work in the hands of authors.

<sup>8</sup> E.P.A.C. Background Paper No. 38, Feb. 1994, p. 30

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- <sup>9</sup> Bond, Gary, " The Trend Towards Larger Cereal- Growing Enterprises", B.A.E.,*Rural Economy, Quart. Review*, Vol. 1, No. 4 Nov. 1979, p.p.287/291.
- <sup>10</sup> Rees, Ben, " Paradox of Plenty", Rebuilding Rural Australia Conference, hosted by Ernst Young and Q.U.T. Toowoomba Dec. 1995.
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- <sup>14</sup> Kindleberger, C.P., " International Economics", Richard.D.Irwin, 5th. Edition, 1973, p.77
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