SUBMISSION TO THE SENATE EDUCATION, EMPLOYMENT, AND WORKPLACE RELATIONS COMMITTEES

GROWING SOLUTIONS

THE SUPPLY OF INDUSTRY-READY GRADUATES AS THE GENESIS OF SUSTAINED AGRICULTURAL PRODUCTIVTY IMPROVEMENETS FOR AN INCREASINGLY HUNGRY WORLD

Duncanson & Hassell
PRIMARY ADVOCATES PTY LTD

SUBMISSION TO

THE SENATE EDUCATION, EMPLOYMENT, AND WORKPLACE RELATIONS COMMITTEES

Mr Tim Watling,
Committee Secretary (via eewr.sen@aph.gov.au)
Senate Education, Employment and Workplace Relations Committees
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

BY

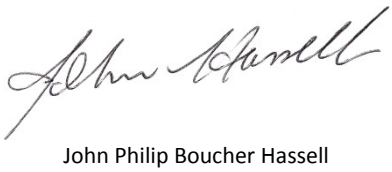
MR ROBERT ROY DUNCANSON, MANAGING DIRECTOR
MR JOHN PHILI BOUCHER HASSELL, EXECUTIVE DIRECTOR

PRIMARY ADVOCATES PTY LTD

ABN 60 105 778 809
PO Box 243
Melville WA 6956
Australia

Submitted: Monday, 7 November 2011

Robert Roy Duncanson



John Philip Boucher Hassell

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2 DECLARATION OF INTERESTS

Consistent with contemporary disclosure and probity standards, directors of Primary Advocates Pty Ltd (PAPL) currently hold the following offices:

Roy Duncanson B.Bus.(Agric.), DipCD

- Interim CEO, Agribusiness Council of Australia
- Secretary, Agribusiness Alumni Association Inc.
- Managing Director, Primary Advocates Pty Ltd

John Hassell B.Bus.(Agric.), DipAgron

- Director, Cooperative Bulk Handling Ltd
- Board Member, The Muresk Old Collegian's Association Incorporated

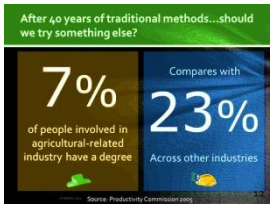
3 EXECUTIVE SUMMARY

The world has a growing problem, and Australia is in a unique position to do something about it; albeit again meaning we must get smarter about how we contribute to feeding an increasingly hungry world. Australia must contribute to optimising the world's food systems, since declining global food security conditions lead to instability; which in turn increasingly affects our national security. Domestically, whilst food security as a public policy issue has yet to 'bite', without attention to increasing productivity in agriculture and the domestic food system, all Australians can expect to see accelerating food prices rises, and sustained consequential dampening effects on the Australian economy via rising inflationary pressures that rising food prices inevitably bring.

In order to maintain high living standards, it is a folly to think that Australia can increase economic productivity via low labour costs; therefore the nation must compete by increasing economic productivity in other ways. The most obvious way is to create genuine national wealth through the adroit exploitation of Australia's vast natural resources using new technologies. To do that, Australia needs a well-educated and trained workforce skilled in in the very industries that exploit its natural resources; namely, mining and agribusiness.

The old business maxim "*growth hides mistakes*" is particularly apt in Australia right now. The enormous mineral wealth within Australia, particularly Western Australia, is not sustainable since "*you only dig things up once*". Whereas Australia's other wealth-creating industries must be sustainable, it is a mainstay industry any nation must have in perpetuity. Australia's mineral boom is garnering so much short-term economic attention that it is 'bleeding other industries' in order to fuel its growth, rather than being invested in optimising the Australian economy (i.e. as in future funds). It is widely reported than the best skilled talent in many industries are being lost to the mining boom, and agriculture is no exception.

However, labour losses to mining are only a recent phenomenon affecting agribusiness: the decline in the rate of increase in Australia's agricultural productivity has it genesis up to four decades ago. The decline has been slow, almost imperceptible, and no one event has triggered the crisis now upon the industry.



At the core of any industry productivity in Australia is '*working smarter, not harder'*, and that means taking every step to ensure the national wealth-creating industry workforce well is educated and trained in a way that graduates are available to industry as and when required. Yet today, in mining and agriculture, the gaps between industry demand for graduates and Australia's tertiary education system's supply of them has never been wider. This is particularly so in the Australia 'agribusiness sector'. The current Australian tertiary education and training system has failed our wealth-creating industries, and restricted their economic performance. The problem is particularly pronounced in agriculture: the 'system' is broken, there is market failure, and it needs to be fixed now or the likely long-term adverse effects will be quite profound.

This submission addresses the root cause of those conundrums and poses some solutions to ameliorate them. Surprisingly, the costs of the 'fix' are small relative to the long-term economic gains using some simple structural reforms within the sector (providing private and public institutions work together as part of the sector). Why, because **the 'fix' involves addressing the genesis of all industry productivity – increasing industry-ready graduation rates (actually, a comparatively small number is required)**. All problems within the sector can be traced back to falling graduation rates.

In recent decades, the education system has become a major export earner in its own right. Its growth however, has not included its perceived societal obligation (or CSOs) to '*educate and train Australia's industries first'*. The tertiary education University sector has failed the Australian people in this regard, and they continue to do so whilst the supply of quality graduates for our domestic economic mainstay-industries remains unmet.

4 TERMS OF REFERENCE (TOR) TO THE SENATE INQUIRY

Higher education and skills training to support future demand in agriculture and agribusiness in Australia.

The terms of reference relate to the provision and content of higher education and skills training for agriculture, the adequacy of current educational arrangements in meeting the Australia's agricultural labour market needs, and the impact of any supply and demand discrepancies on business, research, and the economy more broadly.

Specifically, the committee will consider during the course of this inquiry:

1. the adequacy of funding and priority given by governments at the federal, state and territory level to agriculture and agribusiness higher education and vocational education and training;
2. the reasons and impacts of the decline in agricultural and related educational facilities;
3. solutions to address the widening gap between skilled agricultural labour supply and demand;
4. the impacts of any shortage on agricultural research;
5. the economic impacts of labour shortages on Australia's export oriented agricultural industries;
6. the incorporation of animal welfare principles in agriculture education; and
7. other related matters.

5 DEFINITIONS

The Committee is urged not to underestimate the power of the definitions of five terms used within this submission, they are crucial to fully understanding and interpreting the concepts conveyed within.[1]

1. Agribusiness: In agriculture, "agribusiness" is a generic term for the various businesses involved in food, fibre, and renewable fuel production and consumption chains: including farming, fishing, and forestry, contract farming, seed supply, agrichemicals, farm machinery, wholesale and distribution, processing, financing, marketing, banking, insurance, transport logistics, machinery and equipment manufacturing, export, wholesale, and retail sales etc.

2. Value Chain (or Agribusiness Industry Wealth-Creation Chain): The value chain, also known as value chain analysis, is a concept from business management that was first described and popularized by Michael Porter in his 1985 best-seller, *Competitive Advantage: Creating and Sustaining Superior Performance*. In this submission, the concept is applied to the entire agribusiness sector and its contribution to an economy (whether global, national, state, regional, or local).

   - As both 'agribusiness' and 'value chain' concepts are relatively new to business and academic lexicon they have yet to enter common usage and lay language with their full and precise meaning. Thus, it is commonplace within the agribusiness industry to conceive the 'agribusiness value chain' as just being those economic activities involved in the sequential parts of Porter's model (i.e. reflecting the homily 'from farm gate to plate'). Of course, much of agribusiness occurs before the farm gate too. However, none of those commonly understood sequential activities can exist without a plethora of supporting businesses such as banks, insurance companies and specialist professional firms supporting them, farmers included. Thus, within professional discussions within the industry we find that in the majority of cases the following two over-simplifications occur:

     1. Discussion about the agribusiness value chain tends to 'forget' the important role of supporting economic value-adding activities, and discussions quickly revert to just the concepts surrounding sequential economic value-creation activities. As a result, whole sections of the economy are omitted from discussions. This has a real practical impact with adverse consequences, since these firms are not represented within any known peak "agribusiness" industry lobby group. As such, there is no group that can speak for the industry as a whole.

     2. Similarly, in systems-based discussion about the entire agribusiness sector, approximately a third of our economy, any word with the prefix 'ag' in front of it (e.g. agribusiness, agro-politics, agricultural economics) tends to result in discussions becoming oversimplified with just 'farming' analogies and conceptualizations. Thus, agribusiness-sector wide discussions quickly deteriorate into farming sector analogies (and yet farming is only a sub-set of the agribusiness economy).

   The overall result is that complex systems-wide discussions about 'a third of the economy' quickly revert to over-simplifications involving a small part of the farm sector akin to the worst features of agrarian fundamentalism (along with all its attendant myths, legends, biases and misperceptions [(e.g. *no farmers, no food*]).

[1] Other useful definitions are provided within Duncanson (2010).

3. Wealth-Consuming Industries: The economic activity of an industry that consumes or expends public receipts collected by governments as tax (e.g. health, education, law & order).

4. Wealth-Creating Industries: The economic activity or an industry that generates genuine wealth through the profit making efforts of organisations and individuals; Government's then tax these profits which become a Government's revenue (i.e. public receipts).

5. Wealth-consuming hegemony: In general, an economy must *'live within its means'*, and thus wealth-consumption should never exceed wealth-creation in any society. Thus, it is also important to understand that the total number of people (votes) involved in Australia's wealth-creating industries (all of them), is in a minority compared to the total number of people (votes) employed in Australia's wealth-consuming industries (all of them). Thus, all people involved in all of Australia's wealth-creating industries are in the minority political position within our democracy.

   For the purposes of this submission, this phenomenon is a ***wealth-consuming hegemony*** exerting itself over those industries that create our national wealth. Re-stated, the combined political power of wealth-consuming sectors is far greater than the combined political power of the wealth-creating sectors of the Australian economy. This exhibits itself as a 'natural bias' in the application of and access to public resources to wealth-creating industries, and that works against the optimal wealth generating capacity of the Australian economy over time.

Thus, these definitions are pivotal in understanding the key tenants of the problem(s) before this inquiry, since public education and training underpin all industry productivity levels. National productivity levels are in turn the key international strategic component of any national economy operating in an increasingly competitive global context.

Since most of Australia's wealth-creating industries are based upon natural resources, if Australia did not have such plentiful natural resources then the national economic outlook would be very dire indeed. It follows, that providing key public resources to optimise wealth-creating industry productivity just makes economic sense; and it is in the national interest to do so.

Stripping back education, training, and research funding that supports Australia's wealth-creating industries (whether intended or not) is ultimately not a cost saving, it is a failure to invest in the future well-being of all Australians – and indeed, far beyond that, a failure to make an uniquely Australian 'can do' contribution to the future well-being of all humanity.

It is in our national security interest to provide agribusiness systems leadership and excellence when Australia makes its contribution to feeding an increasingly hungry and insecure world.

6 ADDRESSING THE TERMS OF REFERENCE

6.1 HIGHER EDUCATION AND SKILLS TRAINING TO SUPPORT FUTURE DEMAND IN AGRICULTURE AND AGRIBUSINESS

6.1.1 Introduction

Primary Advocates Pty Ltd congratulates the Senate (all parties) for instigating an inquiry into this particular area. It shows that the Australian Senate is prepared to tackle the very core productivity issues affecting 'how best to feed an increasingly hungry world', which in turn relies upon the world's largest industry to achieve that very outcome: agribusiness. For agribusiness is the world's largest industry encompassing 50% the world's labour force, 50% of the world's assets and 40% of consumer purchases. Agribusiness is currently Australia's second largest industry. Despite problems identified herein, Australia competes well in the global agribusiness competitive environment in spite of formidable world trade barriers and subsidised agricultural industries in many countries.

Nonetheless, *agribusiness* has a growing problem: the global demand for food, and consequently food prices, are at their highest levels ever, yet there are not enough graduates to fill industry vacancies to meet these future challenges. The problem is global in expression, so relying upon immigration into Australia to fill skills gaps will only adversely affect other countries (because they are experiencing shortages too).

> "Make no little plans. They have no magic to stir men's blood and probably will not themselves be realized."
>
> *Attributed to Daniel Hudson Burnham*

6.1.2 Key Points

The problem is beyond dire, it is chronic now, and future prospects are bleak if current whole-of-industry methods of operating continue. The 'system' is broke and must be fixed.

With regard to the overall topic of this Inquiry, we would submit that key issue is the 'systemic failure' of Australia's education and training system with regard to agriculture and agribusiness as articulated in Figure 1: Performance Outcomes for the Education and Training Sector in Agriculture and Agribusiness on page 9 below.

It is submitted that this is the key overall outcome performance measure relevant to this Inquiry, and it is this outcome measure that should form the basis of future performance metrics designed to ensure wealth-creating industry skills gaps match industry needs in a timely way (i.e. to ensure 'market failure' of the current ilk does not occur in the future).

Figure 1: Performance Outcomes for the Education and Training Sector in Agriculture and Agribusiness

The gap between the supply of graduates (all levels) and industries' demand for them are their historically highest levels. The problem is now, and will continue long into the future (even if addressed now), because the public education and training sector is notoriously slow to act. Even if the "7% issue" figure is improving gradually over time, it is not sufficient to improve at current rates since the difference is a three-fold order of magnitude. This "7% outcome" is evidence of market failure in the agriculture and agribusiness sector, particularly when 'timeliness of supply of graduates' is taken into consideration. All education sectors are notoriously slow to adjust, so the prospects for this improving anytime soon are very grim without appropriate government interventions to address these market failures.

Key Point: Irrespective of political philosophy, it is a valid role for government to intervene when 'market failure' is evident, or the market signals are not stimulating appropriate market responses.

Key Point: In the higher education sector, there is no mechanism in existence in Australia today that connects industry needs for 'industry-ready' graduates to educational outcomes in any mandatory systematic way. The only mechanism that exists is the voluntary "Advisory Committee System", wherein each educational institution and or their academics involve 'advisors' in their deliberations. There is no compulsory component applying to either party, and consequently there is no formal connection between 'industry need' and 'government funding' of the public education and training sector in support of Australia's wealth-creating industry needs.

This 'advisory committee system' approach is prone to abuse and over time has become so bad that various disparaging terms have been used to describe it, including:

1. "Opinion Shopping"
2. "Advisory Committee Fatigue"
3. "The Consultation Farce"

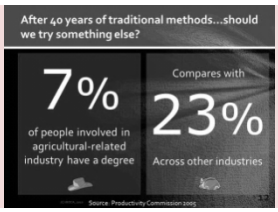
Therefore, it is fair to say that the "Advisory Committee System" has failed to meet ag-industry needs, and that the system cannot continue to be solely relied upon to redress the "7% issue" problem. Further, many would argue that similar failings also exist within the VET sector to (as evidenced by very large skills gaps in that sector too).[2]

[2] The Agri-Food Council does provide a mechanism of limited effectiveness within the VET sector. However, large skills gaps evidence its shortcomings.

A range of other important issues relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.1.3 Discussion

Readers should take the time to ponder this "7% issue" at length (i.e. in Figure 1 on page 9 above): please read the slide over and over.



Whilst Figure 1 above deals with 'graduates' from higher education institutions, the author(s) are unable to source a suitable similar figures applying to the Vocational Education and Training (VET) sector. However, it is highly likely that the similar figure for the VET sector is indeed worse. Analyses of a comparable VET activity in Western Australia suggest the strong possibility that is the case, and thus, the "7% problem" is endemic nationally across the education and training sectors (i.e. at all post-secondary levels).

Right now there are some 4,000 vacancies annually (the figure varies depending upon source) annually and yet the total output from the entire higher education system is some 700 graduates; thus the situation continues to deteriorate.

The continuance of this type of outcome is:

- Economic stupidity (based simply upon the sound business premise that you look after existing 'core business' first; re-stated, surely one ensures that those industries that create wealth for the economy can optimally enhance their productivity levels before then ensuring efficient market forces can deal with the issue of growing new types of businesses in the economy?);

- Socially inequitable (i.e. those that choose to live and work in the regions by choice are unable to gain equitable access the very education and training services endemic to the wealth-creating industries within the regions (particularly mining, agribusiness and tourism); and,

- Regionally unconscionable (i.e. one is simply disadvantaged by living in a region, facts which are well known and documented. Efforts to address regional disadvantage by such mechanisms as "regional loading" never actually cover the full cost to the regional resident – rather, such schemes seemingly merely placate regional residents at minimal costs to centrist city-based government treasuries in favour of the 'wealth-consuming hegemony').

6.1.4 Solutions

The following solutions are proposed in the form of recommendations to the Inquiry.

RECOMMENDATION 1 *That the AgriFood Skills Council[3] terms of reference and supporting processes*

[3] This approach should apply to skills advisory councils relevant to Australia's wealth-creating industries, indeed the argument could easily be relevant if extended to all skills advisory councils.

expanded to include the higher education (university) sector.

The above approach should apply to skills advisory councils relevant to Australia's wealth-creating industries, indeed the argument could easily be relevant if extended to all skills advisory councils. However, that aspect is beyond the scope of the terms of reference of this Inquiry but is included for completeness.

RECOMMENDATION 2	*That the Commonwealth Government should devise "Minimal Consultation Standards" for application between industry and higher educational institutions, and funding to the higher educational sector should be may conditional upon the provision of annual evidence that such standards have been adhered to (to the satisfaction of industry as evidenced by their signatory thereto).*

The above approach should apply also apply more generally through the public sector, i.e. the widespread adoption of 'minimal consultation standards' between the Government and the public. However, that aspect is also beyond the scope of the terms of reference of this Inquiry but is included for completeness.

RECOMMENDATION 3	*That the Commonwealth Government establish an "Australian Agribusiness Council (AAC)" to advise the Prime Minister on agribusiness industry needs for graduates and research standards (via or additional to PMSEIC[4]). The membership of the AAC should consist of the Chairs of each respective State and Territory Government 'Agribusiness Council'-equivalent to ensure State's needs are met.*

Note: Only South Australia and Victoria have established such Agribusiness Council's so far, and they are both relatively new to the advisory scene in the Australian agribusiness landscape. These peak government advisory groups should be matched by their private industry 'lobbyists' counterparts at the peak industry body level (e.g. the Agribusiness Council of Australia, and their respective state and territory based counterparts).

RECOMMENDATION 4	*That the Commonwealth Government should proactively support the establishment and development of the Agribusiness Council of Australia (ACA), 'without strings attached', to assist the industry overcome its highly fragmented nature, and thus facilitate an economy-of-effort when the Commonwealth Government wishes to consult with the Agribusiness Sector.*

This is the best way to ensure sector-wide views are obtained, inclusive of the farm sector a major subset of the agribusiness sector. The agribusiness sector includes non-food agricultural industries too, such as fisheries, forestry, fibre (wool, cotton, etc.), and renewable bio-fuels.

If the Commonwealth government is prepared to support CHOGM-type announcement involving multi-lateral efforts in food security with the creation of a multi-million dollar "Food Security Centre" (namely $35m) without having:

- A cogent national agribusiness strategy or policy;
- A completed farming 'blueprint' as recently proposed by the National Farmers' Federation; or,
- A Commonwealth Government food industry plan or policy;

[4] (PMSEIC, October 2010)

of its own in place, first; then one can only wonder how effective that new centre will be in advising other nations when Australia's does not have its 'own house in order first'. Thus, to be consistent with a proportional response, the Commonwealth Government should easily see the wisdom of providing funding of an appropriate order of magnitude if it is genuine in its intent to provide food security advice to foreign governments (i.e. lead by example).

RECOMMENDATION 5	*That the Commonwealth Government provides $100m to fund the establishment of the "Agribusiness Council of Australia (ACA)".*

There is estimated to be over 4,000 agricultural-related organisations in Australia today, more if the agribusiness sector were include. These figures do not include private agricultural and agribusiness companies. The Australian agro-political scene is highly fragmented, rife with diseconomies of effort, and thus economically and politically inefficient. Thus, funding of this magnitude would forever more assist all government jurisdictions in Australia in achieving a cost-effective economy-of-effort and help overcome the current disparate and uncoordinated efforts occurring throughout the Australian agribusiness sector and 'agro-political' scene.

RECOMMENDATION 4 and RECOMMENDATION 5 above, working in combination will ensure industry needs are systematically articulated and responded to (with heighten reciprocity and goodwill between industry and government), but even this will be wasteful if they both end up becoming yet another high-level advisory group without pre-set performance metrics and regular efficaciousness audits. Such advisory groups must be empowered to ensure industry needs are actually enacted in a purposeful and meaningful way. This can be achieved by:

RECOMMENDATION 6	*That Commonwealth Government mandate tertiary education providers to develop plans, strategies, and budgets (inclusive of marketing and other 'student enrolment attraction mechanisms') that will match industry demands for industry-ready graduates.*

…and,

RECOMMENDATION 7	*That Commonwealth Government mandate that AAC and the ACA jointly approve (i.e. sign off) or amend such plans as a condition of higher educational institutions receiving public funds to meet industry needs.*

It is recognised that there are a number of process and practical difficulties with actually implementing RECOMMENDATION 6, and RECOMMENDATION 7, however this Inquiry should considered the intent of the solutions recommended and at least strive to achieve that end. To be clear, the underlying intent is to seek ways to best match industry needs with public tertiary education and training output.

RECOMMENDATION 8	*That Commonwealth Government mandate and ensure Australia's wealth-creating industry-determined education and training needs are met from within the existing publicly-funded budget arrangements for each relevant higher educational institution. Once such 'wealth-creating' industry needs are met, then such institutions remain free to expend their Commonwealth sourced public funds 'without further strings attached' in a manner consistent with the Bradley Report.*

Our company would refer to RECOMMENDATION 8 in short-hand as "*Bradley Enhanced*", as a way of simply indicating that in our opinion, this Inquiry needs to consider ways to enhance the current policy approach to the Australia tertiary education and training system. That 'enhancement' is to better inculcate into the system, ways to ensure Australia's wealth-creating industries needs for graduates and research are best optimally met.

Failing all of the above, if the publicly-funded tertiary educational and training system is to remain largely disconnected and irrelevant to industry needs, then clear steps should be taken (in conjunction with the States) to establish Australia's first cross-border (i.e. truly national) Industry-Governed Agribusiness University (for example as articulated in (Duncanson, Robert Roy, 2010). This can be achieved by:

RECOMMENDATION 9	*That the Commonwealth Government works cooperatively with the States and Territories to created Australia's first cross-border, truly national, Industry-Governed, Australian Agribusiness University (AAU).*

By all governments working cooperatively and making good use of existing physical assets around Australia, (namely the former agricultural colleges and other regional campuses), the basis for a new Australian Agribusiness University (AAU) under appropriate industry governance arrangements is easy to envision. This would best be achieved as a Commonwealth sponsored Public-Private-Partnership (PPP) arrangement initially, and thence by evolving in a planned and systematic way into a fully private university to service industry needs.

Without too much extra 'visioning', it is easy to conceptualise how a national approach to creating a industry-based university is wholly consistent with the notion that agribusiness is the world's largest industry, and Australia must compete globally. Such a structural reform would best position Australia to focus its competitive strategies globally using combined industry, educational and training efforts.

Alternatively, or as an interim step,:

RECOMMENDATION 10	*The Commonwealth Government expand and re-focus the charter of the Australian National University (ANU), in consultation with the States, to become the interim overarching entity, or sponsor, for the creation and development of the Australia Agribusiness University (AAU) utilizing:* *1. Industry involvement via Public-Private-Partnership arrangements; and,* *2. Existing regional educational campuses and other assets around Australia.*

It would be possible to envision the proposed AAU as a subsidiary of the ANU, and possibly a similar equivalent for the mining industry. However, there are a number of pitfalls in this approach. Nonetheless, such a parent-subsidiary business model would ensure that the ANU become a truly national university in more than name only, and provide it would a pivotal strategic role within the Australian economy.

Whichever business model process is adopted, the means to achieve them need addressing carefully. Thus, as a cost-effective enabling device to ensure the highest standards are achieved from the outset, appropriate funding should be provided to ensure adherence to existing national higher education protocols (already agree to by the Australian governments).

RECOMMENDATION 11	*That the Commonwealth Government provide to the proposed Australian Agribusiness University (or its sponsor) $30m in funding) to achieve the requisite*

registration of higher education provider status and requisite course accreditations consistent with existing national higher education protocols.

Either or both of RECOMMENDATION 9 and RECOMMENDATION 10 working as stepping stones in a process would overcome the current model of federally funded, but state owned and controlled universities that have failed Australia's wealth-creating industries.

Agribusiness is a global industry that competes globally, so it follows that Australia's industry higher educational institutional arrangements should reflect that competitive need at the national level, rather than at the state level (whilst concurrently addressing climatic differences and State specific needs). This industry-based national university approach would geographically span all Australia's climatic zones and thus would maximise the national capacity to strategically compete in the world' largest industry. Inter-jurisdictional Commonwealth-State cooperation can easily be overcome with adroit start-up funding arrangements in conjunction with industry (which the Commonwealth ought to fund anyway). Properly established, and strategically managed on the global stage, industry funding will see the need for public funding decrease over time.

In summary, the Commonwealth Government should properly establish industry graduate needs (via industry formal approval mechanisms), devise strategies to meet those needs as a 'national strategic productivity priority', and once those priorities are met, then institutions would be free to go about their business in the normal way to attract students and conduct their business. Or, create a new type of national industry-government tertiary education institution designed to achieve global competitive excellence from the outset.

A number of other candidate solutions relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.2 THE PROVISION AND CONTENT OF HIGHER EDUCATION AND SKILLS TRAINING FOR AGRICULTURE

6.2.1 The Content of Education and Training for Agriculture

The content of higher education and skills training for agriculture is beyond the scope of this submission, except to make these observations:

1. Tertiary education (particularly Universities) course and curricula advisory roles consume a large amount of industry time and resources with little discernible effect, and this contributes to 'advisory committee fatigue'. However, that is of no major concern except insofar as to acknowledge industry's large unpaid resource contributions in that regard. Of greater concern is that the time involved in such advisory roles often prevents discussion on the more strategic issue of matching actual industry demands with institutional supply of graduates. (Author's note: In my entire advisory career across three states in three different universities, I cannot recall ever having such a discussion as an agenda item. In other words, there is a constant danger of '*never seeing the forest because of the trees*').

2. The instance above goes to demonstrating that educational institutions and their academics are more concerned with their own academic advancement needs (improving their qualitative offerings), rather than with industry's (quantitative) needs. Meeting industry qualitative needs does help improve the academic standards, and therefore the career prospects of academics. Whereas addressing industry quantitative needs goes to increased workload for academics because the emphasis goes to 'educational

process improvement', rather than raising academic standards. These are conflicting needs, one rewards and academic, the other does not.

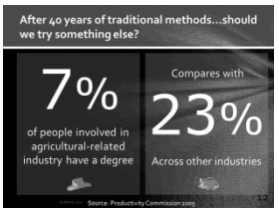
3. If the whole tertiary agricultural and agribusiness education and training system is underfunded and ineffectual, then important issues like 'animal welfare' will never be adequately addressed – there are just too many other important things to include in an already busy, inter-disciplinary, curriculum. As priorities go, many ag-courses have 'dropped' the study of ethics-oriented subjects, and as animal welfare considerations are a subset of that, there would seem little chance of them being adequately addressed without a substantial funding boost to the tertiary agricultural and agribusiness education and training sector.

6.2.2 The Provision of Education and Training for Agriculture

The provision of higher education and skills training for agriculture is a key national strategic productivity lever, one of the very few available to the national leaders to optimally position Australian in the global economy. This is because graduation rates, ultimately, contribute to industry productivity (see this argument expanded in Duncanson, 2010 page 8). This is particularly so when the relatively high costs of Australian labour is taken into consideration. If they are to be maintained or improved to retain Australia's current living standards, then there is no alternative other than to increase productivity in other ways. The next best thing is having a highly educated and skilled workforce capable of devising and using the new technologies to achieve continued productivity improvements.

Thus, graduation rates are the key performance monitoring metric and are therefore crucial when monitoring the condition of factor conditions underpinning productivity within the Australian economy.

6.2.3 Key Points



1. Again, as we will constantly argue, tertiary/higher education and skills training institutions (including government administrative bureaucracies overseeing them) have consistently failed Australian agriculture.

2. Nearly all Australia's regional agricultural colleges have closed or are in decline.

3. Nearly all of Australia's city-based agriculturally oriented faculties are in decline (inclusive of those that have merged with other disciplines and have been re-badged to attract students, or to meet organisational structure and administrative requirements (again, which meets institutional needs, not industry needs)).

4. The supply of Australia's agricultural graduates is now insufficient to replace the retirement 'bubble' of agricultural scientists and agribusiness professionals. In some states, there is not enough to replace natural attrition.

5. Research and Development funding is in long-term decline, despite ample evidence to suggest attractive rates of return for public investment in agricultural research and development.

6. Graduation rates are related to R&D output from higher education institutions (the less students, the less R&D output).

A range of other important issues relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.2.4 Discussion

1. This submission believes that the "7% issue" amply demonstrates that the current tertiary education system has failed Australia's oldest and second largest wealth-creating industry (agricultural and agribusiness). When Australia's mineral resources have been mostly exploited, what then?

2. National security and food security policies are linked in the greater national interest, particularly as food security issues within other countries rise as an issue (Cribb, 2010).

3. Enrolments in all national agricultural and agribusiness tertiary education are, by virtue of the current 'tertiary education system' ultimately and inextricably linked to:

- Graduation rates
- Retention by universities of ag-faculty staff
- Ag-related research, development, training, and extension
- Ag-sector productivity
- Profits (and thus taxation receipts to government)

6.2.5 Solutions

Ultimately, graduation rates[5] in ag-related education and training courses are a function of **"industry attractiveness"** (i.e. to students and their parents, peers, and advisors). There are already widespread public perceptions that a career in agriculture or agribusiness is 'unattractive' in relation to other career options available to prospective students. Therefore the solution is to take all cost effective steps to increase 'industry attractiveness' until such time as industry demand for graduates approximates the supply of them. A number of strategies to address this are identified in (Primary Advocates Pty Ltd, 2011, p. 52).

The Inquiry should be aware, or become aware, of range of public and private special interest groups around the world that have sprung up to address component parts of the 'industry attractiveness' issue (it is a global problem). Some examples are:

- Rise of the agvocacy[6] industry in the United States (e.g. www.causematters.com).
- Rise of industry capital funds to support industry promotional efforts (e.g. www.agfoundation.org).
- Rise of "Rotary-like" agribusiness clubs (e.g. www.agribusinessgippsland.com.au and www.agbusinessomaha.com).

[5] Student enrolments are an important performance indicator too, but with in-course attrition, the more reliable metric is graduation rates since it eliminates poor teaching and learning by non-performing educational institutions; it is also better for matching industry demand to supply of graduates.

[6] Agvocacy is a recent portmanteau or neologism arising from the words "Agriculture" and Advocacy" in the United States.

- Rise of agribusiness alumni groups (e.g. www.agribusinessalumni.com and www.ag.purdue.edu/agalumni).
- Increasing prevalence of 'farmer awards' to positively promote the industry and its participants (http://www2.kondinin.com.au/Awards).
- Increasing prevalence of 'industry leadership training' (*e.g.* www.rural-leaders.com.au).
- Proliferation of ag-organisations, old and new, on social networking sites – with emphasis on networking (too numerous to cite here).
- Increasing rate of creation of special interest groups (e.g. www.primaryindustrieseducation.com.au).
- Merging and consolidation of 'failed' special interest groups, mainly mergers designed to overcome falling membership numbers.

By and large, all of these are positive contributions to the sector, and are to be welcomed and encouraged. However, they do add to the overall 'fragmentation' of the agribusiness sector, which is already highly fragmented anyway. There remains no overarching body to coordinate them.

Our company believes that these groups are proliferating because it is beyond the capacity of the existing peak industry bodies to adequately deal with all the issues (especially in a coordinated way), or, other priorities constantly arise that prevent due and appropriate attention being given by existing peak industry bodies.

The key to understanding "***industry attractiveness***" lays in the definition of 'industry', i.e. ultimately it is an industry responsibility. However, no individual firm is currently motivated beyond its own commercial interests to invest in industry attraction marketing. It is not the responsibility of individual firms to do that, thus the onus does fall on those institutions in whose interests it is to attract actual student enrolments. Alternatively, all existing peak industry bodies currently active in representing the sector have failed to make adequate inroads in addressing the challenges posed by 'industry attractiveness'. In general these bodies have only given lip service to the notion so far.

Since the vast majority of university marketing is not course specific, and University 'brand marketing' is the norm, then the university sector has once again 'failed' the industry. The reasons this 'failure' occurs are complex, but mostly self-serving to the University rather than the industry.

However, some solutions do lie in directly addressing the motivations of universities with regard to industry-based course marketing. One solution would be to mandate industry attractiveness marketing as part of their funding process – however, there are practical problems with implementing this in the (current) absence of effective industry consultation mechanisms.

As eluded to in the discussion surrounding the definition of key terms in this submission (i.e. in Section 5 on page 6 above), the Inquiry ought to come to the view that under such definitions it reveals, by logical derivation, that universities are in fact '*part of the agribusiness supporting industries*' that support the Australian agribusiness economy.

Restated, the tertiary education sector is part of the 'agribusiness system' and therefore they have a specific interest and responsibility to address 'industry attractiveness', but have failed to do so. Clearly however, the vast majority of universities would not agree with this view. This claim is evidenced by the widespread paucity of industry attractiveness marketing undertaken by nearly all of Australia universities (instead they mainly market their own university brand). Therefore, a solution may be found in devising Government policies and funding priorities to address this deficiency; namely, mandating a level of industry attractiveness marketing.

i. However, this would be problematic without addressing the failings in the 'advisory committee system', as such funding would not necessarily find its way to that purpose.

ii. Funding industry attractiveness marketing would be most effective if directed to educational institutions with an industry focus (i.e. special purpose industry-based educational institutions). Those institutions without such a focus would tend to 'siphon off' such funding without effective safeguards.

iii. It would be possible to establish a specific purpose body for the sole purpose of 'industry attractiveness marketing' on behalf of the whole agribusiness sector. No such publicly funded body currently exists. In the United States a private sector solution to this is known as the private 'agvocacy' industry. The existence of this American private sector solution clearly demonstrates the need; however such equivalent organisations are unlikely to appear in Australia simply because of the smaller economic size of the industry here.

    Therefore, consideration of a public sector solution is warranted, provided suitable performance metrics to constantly measure its effectiveness are predetermined for funding purposes. Such an approach could form the basis of a levy-funded approach if some agreement on what constitutes 'agribusiness' could be agreed to and a suitable legislative collection mechanism found.

The complexity and size of both the agribusiness sector itself (about a third of the economy), and the attendant 'industry attractiveness' issues warrants a proportionate response from the Commonwealth Government. Based upon experience in Western Australia, the key to addressing this must be found on a whole-of-government basis using appropriate lead-agency mechanisms driven from the Office of the Prime Minister. To assign 'agribusiness rejuvenation' to a single agency will ensure an unproductive silo-type approach to the issue, and little discernible progress will follow.

Agribusiness education is not an issue solely for the Department of Agriculture, nor one solely for the Department of Education (or their equivalents, i.e. DAFF, DEEWR), indeed it is not an issue for both: it is one for both of them and more (e.g. inclusive of DFAT, regional development, transport, defence, etc.). Agribusiness is a true whole-of-Government strategic national issue affecting national competitiveness and should be dealt with at the highest levels of government accordingly.

Readers will deduce from the above discussion, that specific solutions to address the problem of "industry attractiveness" are elusive and incomplete. We make no apology for that, but at least a range of strategies to address the issue have been identified within. Thus, a realistic practical solution to this issue comes from the maxim that "*half the solution to a problem is identifying it*".

Thus identified, the solution to the industry attractiveness problem is to continually focus processes and resources upon it until a cogent solution emerges – this is the right thing to do. The first step in pursuing solutions is this core problem is to identify a suitable body to be 'accountable' for it, and then assist that body to find a workable, cost-effective, and universally agreed way forward.

RECOMMENDATION 12	*That the Commonwealth Government establish and adequately fund (say $5m) an "Agribusiness Industry Promotional Advisory Group (AIPAG)" to jointly advise the newly created Agribusiness Advisory Council (AAC) and Agribusiness Council of Australia (ACA) the following:* *1. The nature of public and private agribusiness 'industry attraction' strategies currently existing (particularly international efforts);* *2. The nature of other possible 'industry attraction' strategies' (as created by the AIPAG);* *3. The outcome of a benefit-cost analyses of each major strategy; and,* *4. A plan to implement them, providing that such implementation not be undertaken by the AIPAG (they must be actioned by the most appropriate organisation).*

A number of other candidate solutions are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.3 The Impact of Any Supply and Demand Discrepancies on Business, Research, & the Economy

We have shown elsewhere that a historically large gap in supply of industry-ready graduates has a 'knock-on effect' right through the economy.

6.3.1 Key Points

The correct sequence of casual impacts (forming part of the wording in this term of reference) is:

1.1 LOWER graduation rates leads to…

↓

1.2 LOWER research (both students and academics), which leads to…

↓

1.3 LOWER business productivity (ultimately reflected in fewer profits), which leads to…

↓

1.4 LOWER economic activity, which leads to…

↓

1.5 LOWER taxes, which leads to less ability to fund education & research… [go back to point 1.]

By logical deduction then, it follows that 'market stimulation' priorities are:

- 1st: Attention to industry attractiveness strategies.
- 2nd: Short-term attention to 457 graduate visas to fast-track industry access to required skill sets, with concurrent attention to tertiary agriculture and agribusiness education and training graduation rates. The 457 visa program can be discontinued when industry graduate supply achieves acceptable 'market equilibrium'.
- 3rd: Research funding, and thence commercialisation of it (whether public or private)

- 4th: Diffusing commercialised technology (formerly called agricultural extension)

Precise analyses of the impact of labour market discrepancies herein are beyond the resources and scope of this submission.

However, a systems based approach reveals that the supply of graduates is the 'genesis issue'; the root cause of all such discrepancies as discussed in (Primary Advocates Pty Ltd, 2011, p. 8). This is because of the way the tertiary education funding system works in Australia today; the effects are sequential in nature and therefore causal in effect on the wider economy.

Thus, falling graduation rates relate directly to decreases in industry productivity.

Further, at the political level, falling graduation rates relate directly to increased food prices. Ultimately the issue affects everybody in our society.

Australians should brace now for accelerating global, national, and local food price increases. Since food prices form a significant component of inflation measures, sustained upwards pressure on inflation will undoubtedly occur without some ameliorating actions to address the subject of this inquiry.

A range of other important issues relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.3.2 Solutions

Given the above scenario, the obvious solution in the first instance is to focus upon increasing ag-related graduation rates, as all other solutions follow on from that solution. It is the root cause of the overall malaise.

'How to' do that is discussed elsewhere in this submission (and in the accompanying paper particularly, (Primary Advocates Pty Ltd, 2011)).

6.4 TOR 1: The Adequacy of Funding and Priority Given by Governments in All Jurisdictions

The current educational arrangements in meeting Australia's agricultural market needs are wholly inadequate.

Over 40 years in at the state-level in Western Australia, there have been 10 major reviews (one every 4 years on average) of one type or another into agricultural education, and all recommendations are similar in nature – keep it going, invest in it. Yet the decline has continued unabated. If the usual 'rule of thumb' where to apply nationally, there would be about 100 reviews or two and a half reviews every year somewhere around the national. Yet the decline has continued unabated.

By way of further example, in September 2009, Curtin University announced that it was withdrawing its courses and financial support from its Muresk Agricultural College campus (inherited by the University in 1969). Prior to that decision Curtin undertook it own review and duly commissioned an 'independent report'. That report went on to recommend the retention of Muresk, and also recommended what actions Curtin University should take to bolster the Muresk condition. History shows that Curtin University took no recommended remedial actions, and decided to 'abandon' the campus and its academic program (once cited as the 'best agribusiness degree

course in Australia'). Clearly, this decision is not industry-based, but University-based without regard to industry needs (i.e. the already historically high need by industry for graduates in existence at the time).

Notwithstanding this specific example (which has been replicated around the nation), the overall problem is amply evidenced by the widespread reporting of skills shortages and unfilled vacancies throughout the sector (and that applies to the mining sector too). The 'gap' reporting is supported by both credible labour market research and constant anecdotal reports (published and unpublished). The graduate gap is 60,000 vacancies across Australia. Even if this figure is inaccurate, its order of magnitude in comparison to the size of the market within agribusiness is not.

Further, there are several other inadequacies:

1. Consistent failure by tertiary education and training institutions to provide sufficient graduate numbers to industry, over many years.

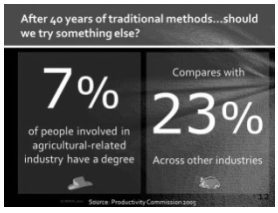
2. Failure of government institutions involved with estimating labour market shortages (particularly as they apply to Australia's wealth-creating industries).

3. Failure to connect labour market forecasts to cogent actions by government bodies to address obvious economic impacts of this (inclusive of those State and Commonwealth authorities have regulatory roles relating to the tertiary education system).

In other words, Australian governments (collectively) can neither identify labour shortages in a timely way for its wealth-creating industries, nor take appropriate actions to address them. Incredulously, this applies to mining and agribusiness, the mainstays of the economy. This situation has extended across the regimes of all political parties in government, state and federal.

6.4.1 Key Points

1. The gap between industry demand for graduates and the supply of them by all levels of the education and training system in Australia are at their highest historic levels. This evidences system-wide performance failure, as articulated (once again) in the figure below. We cannot overemphasize this 'failure' of education and training outcomes.



2. Sources of the graduate shortfall are well known and cited in the bibliography attached to this submission. Even if the 7% figure is improving (trending up), it is more than an order-of-magnitude less than the rest of the economy and must be addressed, now. The authors of this submission believe that the 7% figure is in actual decline because of its relative position vis-à-vis the larger numbers in the rest of the education system (and further exacerbated by the overseas student populations).

3. The current 'educational arrangements' are best described as "the Bradley approach" which is best summarised as the simple provision of funding for the number of students enrolled, or 'bums on seats'. This approach takes no strategic account of the graduate skill needs of Australia's wealth-creating industries, and indeed militates against those needs being met. Clearly, the evidence for this is historical highest ever skills gaps occurring in the very industries that create Australia's wealth. Indeed, we'd all be much wealthier if industry was not hampered so.

4. Again, restated here, there is no mechanism whatsoever that formally connects industry needs to educational outcomes, particularly in the higher education sector. In the VET sector, whilst a mechanism does exist (via the respective Industry Skills Councils), this submission regards that as an ineffective mechanism as evidenced by the large skills gaps.

5. In short, **the 'educational and training arrangements' systematically fail Australia's mainstay wealth-creating industries**; and all the strategically important trends relating to industry productivity are headed in the wrong direction. This systemic failure cannot continue without acceptance of the consequential decline in economic performance relative to Australia's global competitors.

6. Mainly because of the fact that the Commonwealth has provided the bulk of funding to Australia's tertiary and higher education sector (the universities in particular) over the last few decades, it is reasonable to say that most State and Territory jurisdictions has wound-back or lost tertiary education and regulatory policy skills.[7] Whilst a key tenant of this submission is that the entire tertiary education system has failed Australia's wealth creating industries, this aspects also means that the State/Territory bureaucracies have not be able to influence their assets (i.e. their own institutions), which are owned and controlled under their local legislation, to meet the wealth-creating industry needs of their own jurisdiction. As an example, see short summary of this situation as it applies to Western Australia at Section 8 Attachment: Summary of Tertiary Ag-Education Policy in W.A. on page 40 below. Again, in the case of Western Australia,

    a. There is no over-arching contextual WA State Higher Education Policy, period (as evidenced by recent instructions by the WA Minister for Education to the WA Department of Education Services to actually commence developing one).

    b. There is no over-arching contextual WA Agribusiness Policy, period. This claim does not apply to all jurisdictions as some recent contemporary developments have occurred in this regard. However it is fair to say that such industry strategies or policies 'in aggregate' are underdeveloped and no cogent or holistic national agribusiness sector policy exists - howsoever they are derived. This is evidenced by these three recent developments:
        i. This Inquiry;
        ii. The NFF's recent announcements concerned the development of a "blueprint"; and,
        iii. The Commonwealth's incomplete food plan.

    c. The genesis of a draft '*WA Rural and Regional Higher Education Policy*' came from efforts within the WA Department of Regional Development and Lands (DRDL), not from the initiative of the three WA educational bureaucracies or the WA department of Agriculture and Food.

7. Since at both the Federal level, and the State and Territory levels, there exists no known comprehensive tertiary education and training policies for each of their mainstay wealth-creating industries, and historically high graduate gaps occur in <u>all</u> jurisdictions, clearly then the opening sentence in this TOR section remains true. **That being that the current educational arrangements in meeting Australia's agricultural market needs are wholly <u>inadequate</u> for all the mainstay wealth-creating industries <u>in all jurisdictions</u>.**

[7] Clearly, industry-oriented tertiary education and training policies and emphases vary considerably State-by-State. In general terms, this claim is realistic.

A range of other important issues relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011) cited in the publications Section 7 Bibliography on page 39 below.

6.4.2 Discussion

There is no doubt that the Australian higher education sector has grown and itself become a major export earner for Australia. That performance is excellent; however an unintended consequence of this, particularly when it comes to agriculture, is that the Australian education sector has become very efficient at educating and skilling foreign nationals that then go on to become 'competitors' to our domestic industries. Whilst this is to be encouraged in the greater cause of competition, it can only 'make sense' if we first educate and train our own industry to the best possible levels in the first instance.

It follows that Australia has an excellent standard of higher education, then that is why so many overseas students enrol in Australian educational institutions. However, that should not be at the expense of the education and training sector giving a higher priority to attracting overseas students than Australians for the very industries for which Australia has a natural comparative advantage in; namely, the wealth-creating industries of mining and agribusiness in particular. This is evidenced by poor domestic agribusiness student enrolments and graduates rates.

The casual reason why Australian universities are reducing emphases on ag-related disciplines are many and complex, but the statistics are clear – ag-faculties are in decline and cannot begin to match ag-industry demand. Therefore, any reasonable person would agree that the current educational arrangements in meeting the Australia's agricultural labour market needs are inadequate for purpose. Indeed, many are incredulous as to why it is happening at all – it makes no economic, societal, or natural resources management sense whatsoever.

Investing in ag-related education and training is not about 'picking winners', it is about a common sense approach to investing in core business, the core competitive competencies of the Australian economy; it is common sense to optimally invest in '*what core business you already do well*'. The current situation is 'out of balance' with the realities of Australia's strategic needs and inconsistent with a cogent assessment of Australia's factor conditions that form the basis of its competitive positioning within the global economy. We are 'milking' agriculture to such an extent it is declining, and not maintaining it to perform optimally in perpetuity.

6.4.3 Solutions

The Australian agribusiness sector so desperately needs graduates right now that the most obvious short-term solution is to provide 457 visa's to *agribusiness graduates* to address immediate needs.[8] However, since the quantum of vacancies is known, the short-term use of 457 visa arrangements is proposed provided that longer-term solutions addressing the domestic supply of graduates is actually implemented. Depending upon any consequential increases in ag-graduation rates, the use of 457 visas should be adroitly managed until the supply and demand of ag-graduates returns to equilibrium. The 457 program for ag-graduates can then be closed.

RECOMMENDATION 13 *That the Commonwealth Government include agribusiness graduates in its 457 visa*

[8] This was affirmed by Australian agribusiness leaders at a meeting in Canberra on 12 May 2010.

program until such time as the supply of agribusiness graduates fulfils industry needs in a timely way (i.e. there is a return to market equilibrium).

The long-term solution is, simply put, to address the chronic undersupply of ag-graduates in perpetuity, and devise cogent policies that ensures Australia' tertiary education and training system produce the quality and quantity of graduates the industry needs to function optimally. Solutions articulated elsewhere in this submission, and that otherwise arise through this Senate Inquiry process, address 'how to' achieve this.

If appropriate public responses to the proven needs of agriculture and agribusiness are unlikely to be forthcoming, then mechanisms to stimulate appropriate private response to address the situation must surely be considered seriously. On balance, all things considered, the optimal solution is likely to consist of a combination of both.

Irrespective of the nature of solutions to follow this inquiry, none will be successful without addressing the failings of the '*industry consultation system'*. As that is the only mechanism that connects industry needs to educational outcomes, it surely follows that the system acting alone is insufficient to prevent the problems occurring again, or has the capability to address existing problems. Accordingly, it forms both part of the problem, and part of the solution.

Should the Australian Government choose to adopt a 'do nothing' approach, then it will be doing so in the full knowledge that agricultural and agribusiness industry productivity will be adversely affected, and thus the impact on the Australian economy will be deleterious in the medium and longer-term.

Thus, a number of other candidate solutions relevant to this inquiry are canvassed in (Primary Advocates Pty Ltd, 2011). Whilst this publication is specific to the Western Australia circumstance, they are nonetheless characteristic of all situations nationally. It is not possible to address the problems of any single institution without first addressing the overarching malaise of the industry's education and training needs as a whole.

6.5 TOR 2: The Reasons & Impacts of the Decline in Agriculture & Related Education

This section provides a summary of casual factors, the reasons why there has been a nation-wide decline in tertiary agricultural and agribusiness education and training in Australia. To the extent possible, they follow in descending order of importance to the Australian economy and its impact on regional Australia.

6.5.1 Australia Mainstay Wealth-Creating Industries

This 'ag-education issue' serves to highlight the plight of Australia's two largest industries underpinning the national economy – mining and agribusiness (but agribusiness in particular since it has less current capacity to pay). Herein the use of the term 'wealth-creating' industry draws out the underlying issues for discussion.

Figure 2 below serves to highlight the differences between the various industries that are wealth-creating and wealth-consuming (see definitions at Section 5 Definitions on page 6 above). This discernment applies at all levels, including nationally and internationally.

Figure 2: Comparison of Wealth-Creating & Wealth-Consuming Industries

Industry (or Economic Sector)	Wealth-Creating	Wealth-Consuming	Note
Minerals & Energy	✓		Minor public wealth-consuming
Agribusiness	✓		
Tourism & Hospitality	✓		
Health Services		✓	Minor private wealth-creation
Education		✓	Minor private wealth-creation
Police & Justice		✓	
	Rely on Private Resources to Generate Income & Operate	Rely on Government Funding to Generate Income & Operate	

6.5.2 Tertiary Education Generic Strategies (Design Failures)[9]

Under the scenarios outlined below, the tertiary education sector, mainly consisting of Universities, will never allow genuinely industry-based regional campuses like Muresk, WA School of Mines in Kalgoorlie, and some other regional campuses to deploy their inherent capabilities in a manner appropriate to meet industry and regional needs. Of course, not all Universities can be '*tarred with the same brush*', however the economic forces at play today in Australia, as expressed by the dominant source of University funding (i.e. from the Commonwealth), militates against them doing otherwise.

Where 'doing otherwise' means city-based Universities allowing regional campuses to compete in their respective markets using cogent strategies without inappropriate interference from their centralist controls.

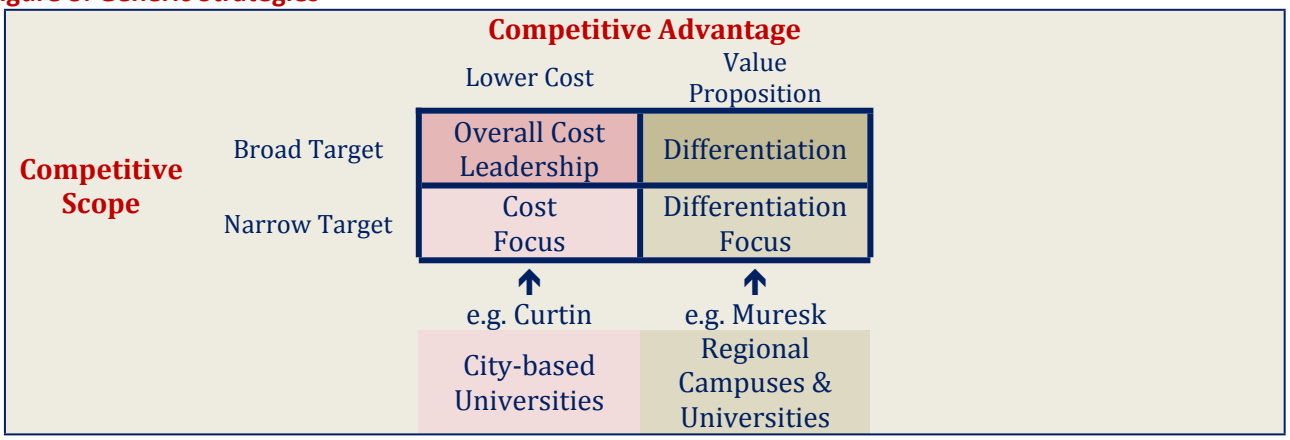
6.5.2.1 Regional Failures

Regional campuses have higher operating costs just by virtue of the higher costs of living in regional Australia. Therefore, any strategy based on being a low-cost provider simply will not work (since it cannot control the costs of operating in a regional area). This implies that regional campuses and universities simply cannot afford to adopt any generic strategy involving a low-cost approach to seeking a competitive advantage in the 'education marketplace'.

This generic strategy argument is summarised in Figure 3: Generic Strategies below.

[9] (Porter, Competitive Strategy, 1980, pp. 34-46) and (Porter, Competitive Advantage, 1985, pp. 11-26)

Figure 3: Generic Strategies[10]



Contemporary higher education funding in Australia today, almost entirely provided by the Commonwealth Government, has seen University business models having little choice but to rely upon adopting a 'cost leadership' strategy in order to gain a comparative advantage in the marketplace. This may not be the preferred strategy of many a university, however, in times of budget downturns it is inevitable that overall funding is reduced to the sector. Consequently, many universities have little choice but to adopt that strategy University-wide.

It follows, that any operating unit within the university will come under pressure to conform to the university-wide strategy. With higher operating costs, regional campuses fall victim to these pressures early, a factor further exacerbated by:

1. The small numbers, comparatively, within the politics of the University (i.e. a city-based hegemony that sees region-based campuses greatly outnumbered within University decision-making forums – an expression of the dominant wealth-consuming hegemony).

2. The higher costs, comparatively, of industry-relevant course costs that involve multi-disciplinary or high cost disciplines (e.g. agriculture, mining, engineering, science).

In effect, universities' 'force' their regional campuses, and certain industry-based campuses to adopt a strategy that is an anathema to their actual cost circumstances and positioning within their educational markets. Consequently, the University is blind to their competitive stance, and this damages the regional campus's competitiveness in their particular market (industry or region), often to the point of failure, and closure is a sad but inevitable result. The fault is that of the executive management of the university, not that of the regional campus (although bad management at a regional campus can hasten the failure).

There are no known examples where large city-based Universities have allowed regional-campuses to adopt a generic strategy different to that of the University itself (if it exists, then it is the exception rather than the rule). That would require a Vice-Chancellor (and their coterie of senior executives) to possess advanced contemporary executive management skills that are capable of accommodating 'cultural' or 'strategy' differences within their reporting entities.

QUOTE 1 "…inability to see required product or marketing change Porter (1980) p. 45

[10] See (Porter, Competitive Advantage, 1985).

	because of the attention placed on cost;…"	
QUOTE 2	"A firm that engages in each generic strategy but fails to achieve any of them is 'stuck in the middle'. It possesses no competitive advantage. This strategic position is usually a recipe for below average performance."	Porter (1985) p. 16
QUOTE 3	"Given the pivotal role of competitive advantage in superior performance, the centrepiece of a firm's strategic plan should be its generic strategy. The generic strategy specifies the fundamental approach to competitive advantage…and provides the context for actions to be taken in each functional area."	Porter (1985) p. 25

To require a relentless focus on costs, for any organisational unit that has high costs that are unavoidable merely because of where it is located, is a recipe for disaster. Ultimately, unless a University can defray regional campus operating costs in some other way, all region-based educational institutions will fail and services will contract to major urban centres.

This is, in effect, what is happening all around Australia under the current regime of higher education funding in Australia today. Respite measures to assist region-based Universities and campuses (such as the inadequate Commonwealth Regional Loading Scheme) will only put off the inevitable. Our society must have a fundamental change in strategic approach here. The system is broken, it needs fixing; or all of regional Australia will be further disadvantaged and national productivity will decline as a result.

This phenomenon is national in expression.

6.5.2.2 Industry Failures

Following on from the failures of generic strategy outlined in section 6.5.2 Tertiary Education Generic Strategies (Design Failures) on page 25 above, then this means that any high cost organisation unit or academic discipline is equally at risk if a university pursues a low-cost dogma relentlessly. Thus, those industries that have high-cost-to-provide academic disciplines associated with them are also at risk without other cost offsetting factors. These can be:

1. Academic disciplines, those too expensive in their own right. Examples are:

    a. Agricultural Engineering
    b. Agricultural Management (Farm Management)
    c. Agricultural Science
    d. Electrical Engineering
    e. Medicine
    f. Mine Engineering
    g. Minerals Science & Geophysics
    h. Veterinary

2. Multi-discipline reliant industries (because a wide range of academics cannot be provided in every regional location with some local critical mass, or travel cost offsets). Examples are:

    a. Agribusiness Management
    b. Fisheries Management
    c. Food Technology
    d. Forestry and Agro-Forestry
    e. Health Services
    f. Transport Logistics

3. Academic disciplines reliant upon access to large areas of land or transport; examples are:

    a. Equine Stud Management
    b. Fisheries, Forestry, and Agriculture (Farming & Pastoral)
    c. Military
    d. Transport Logistics
    e. Viticulture

Given that, and the fact that Western Australia's two largest 'wealth-creating' industries are mining and agriculture, this disadvantages those disciplines to the detriment of our economy. Both industries are screaming out very loudly for more graduates, and as well as semi-skilled workers.

It is also interesting to note:

1. Nearly every tertiary agricultural college has closed or is struggling (even those in urban locations).

2. Agricultural faculties in large-city based Universities are also in decline. Total national graduate output cannot even replace those scientists who are retiring or leave the industry.

3. The Minerals Council of Australia has spent $20m over ten years solely on curriculum development, reportedly to little effect.

4. Demand for both mining and agribusiness graduates is as high as it has ever been, yet university supply of graduates is in decline (agriculture) or simply cannot keep up (mining). They are clearly a mismatch between industry demand and university supply of graduates in Australia's two largest wealth-creating industries.

Again, this phenomenon is national in expression.

6.5.2.3 The Double Whammy (Regional & Industry Decline)

Further to arguments outlined in the two sections above, and given that every mining and agriculturally related business are the economic mainstays of every non-urban region in Australia, the combination of high cost regional education needs and high cost industry needs is a 'double whammy' for Australia. For Australia's wealth-creating industries, this is a double-dose of disadvantage and it hampers their ability to be even more productive for the benefit of the overall national economy.

The problem restated: the competitive strategies adopted by most large city-based universities and imposed university-wide, and this directly militates against the strategies regional campuses must adopt simply because of their (unavoidable) cost structures. This problem also applies to other academic disciplines within universities with high inherent cost structures (because of the cost nature of the teaching and learning function within each discipline). Where universities offer high cost disciplines in regional locations, this situation becomes dire and has, and will lead, to further failure and closure of the regional operations long before their city counterparts.

Unless universities develop methods to defray the high costs of some academic disciplines and regional campuses, so that everyone is working on 'a level playing field', then universities will continue to fail to meet the higher education needs of Australia's main wealth-creating industries and regional Australia – to the ultimate cost of the whole Australia society. Both industries are high cost but ultimately both of them, agribusiness and mining in the regions, also create the mainstay wealth of our nation.

Conversely, and by logical extension of the arguments provided above, if an educational institution has higher costs because it has:

1. Academic disciplines it offers are high cost (e.g. agriculture, veterinary, medicine);

2. Multidisciplinary or interdisciplinary courses (farm management, manufacturing, mine engineering);

3. A regional location;

then it is out of step with mainstream higher educational institutions, which are increasingly funded in a manner which rewards maximising low-cost students above others (this is the case despite increasingly complex funding formula in an attempt to address varying industry needs).[11]

Australia's mainstay wealth-creating industries are proof of 'market failure' in the tertiary education market, since supply does not equal demand now, or will do any time soon. Our company believes that the combined wisdom of all of Australia's Universities cannot deny their collective failure to meet industry needs for graduates; the outcome speaks for itself. In WA, this situation is pronounced and it will continue to restrain WA's economic performance accordingly. This problem may not be noticed by mainstream politics simply because of the pre-occupy effects of the current mining boom. All other jurisdictions are similarly adversely affected.

Yet again, this phenomenon is national in expression. For agribusiness, this phenomenon is global in expression. The Figure 4: The Low Enrolment Problem is Global below shows a similar pattern of low enrolments in the United States (which has over 2 million famers and a huge agribusiness sector supporting it (with a multiplier effect of at least 10 fold)).

[11] This is the predominant outcome of the 'Bradley' approach to higher education in Australia; good for developing an education export industry, but bad for Australia's existing mainstay wealth-creating export industries.

Figure 4: The Low Enrolment Problem is Global

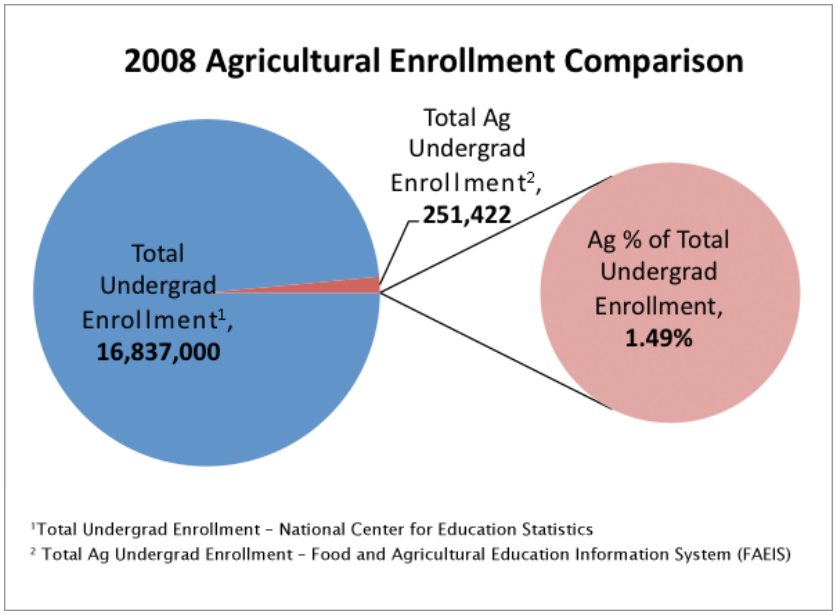
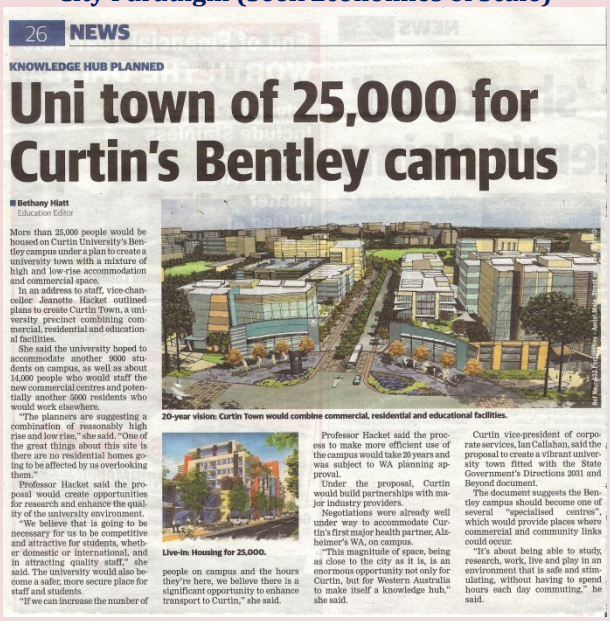


Figure 5: City versus Country World views

City Paradigm (Seek Economies of Scale)



26 NEWS

KNOWLEDGE HUB PLANNED

Uni town of 25,000 for Curtin's Bentley campus

Bethany Hiatt
Education Editor

More than 25,000 people would be housed on Curtin University's Bentley campus under a plan to create a university town with a mixture of high and low-rise accommodation and commercial space.

In an address to staff, vice-chancellor Jeanette Hacket outlined plans to create Curtin Town, a university precinct combining commercial, residential and educational facilities.

She said the university hoped to accommodate another 9000 students on campus, as well as about 14,000 people who would staff the new commercial centres and potentially another 5000 residents who would work elsewhere.

"The planners are suggesting a combination of reasonably high rise and low rise," she said. "One of the great things about this site is there are no residential homes going to be affected by us overlooking them."

Professor Hacket said the proposal would create opportunities for research and enhance the quality of the university environment.

"We believe that is going to be necessary for us to be competitive and attractive for students, whether domestic or international, and in attracting quality staff," she said. The university would also become a safer, more secure place for staff and students.

"If we can increase the number of people on campus and the hours they're here, we believe there is a significant opportunity to enhance transport to Curtin," she said.

20-year vision: Curtin Town would combine commercial, residential and educational facilities.

Live-in: Housing for 25,000.

Professor Hacket said the process to make more efficient use of the campus would take 20 years and was subject to WA planning approval.

Under the proposal, Curtin would build partnerships with major industry providers.

Negotiations were already well under way to accommodate Curtin's first major health partner, Alzheimer's WA, on campus.

"This magnitude of space, being as close to the city as it is, is an enormous opportunity not only for Curtin, but for Western Australia to make itself a knowledge hub," she said.

Curtin vice-president of corporate services, Ian Callahan, said the proposal to create a vibrant university town fitted with the State Government's Directions 2031 and Beyond document.

"The document suggests the Bentley campus should become one of several "specialised centres", which would provide places where commercial and community links could occur.

"It's about being able to study, research, work, live and play in an environment that is safe and stimulating, without having to spend hours each day commuting," he said.

Since 1969

Saturday 04Jun11 "The West"

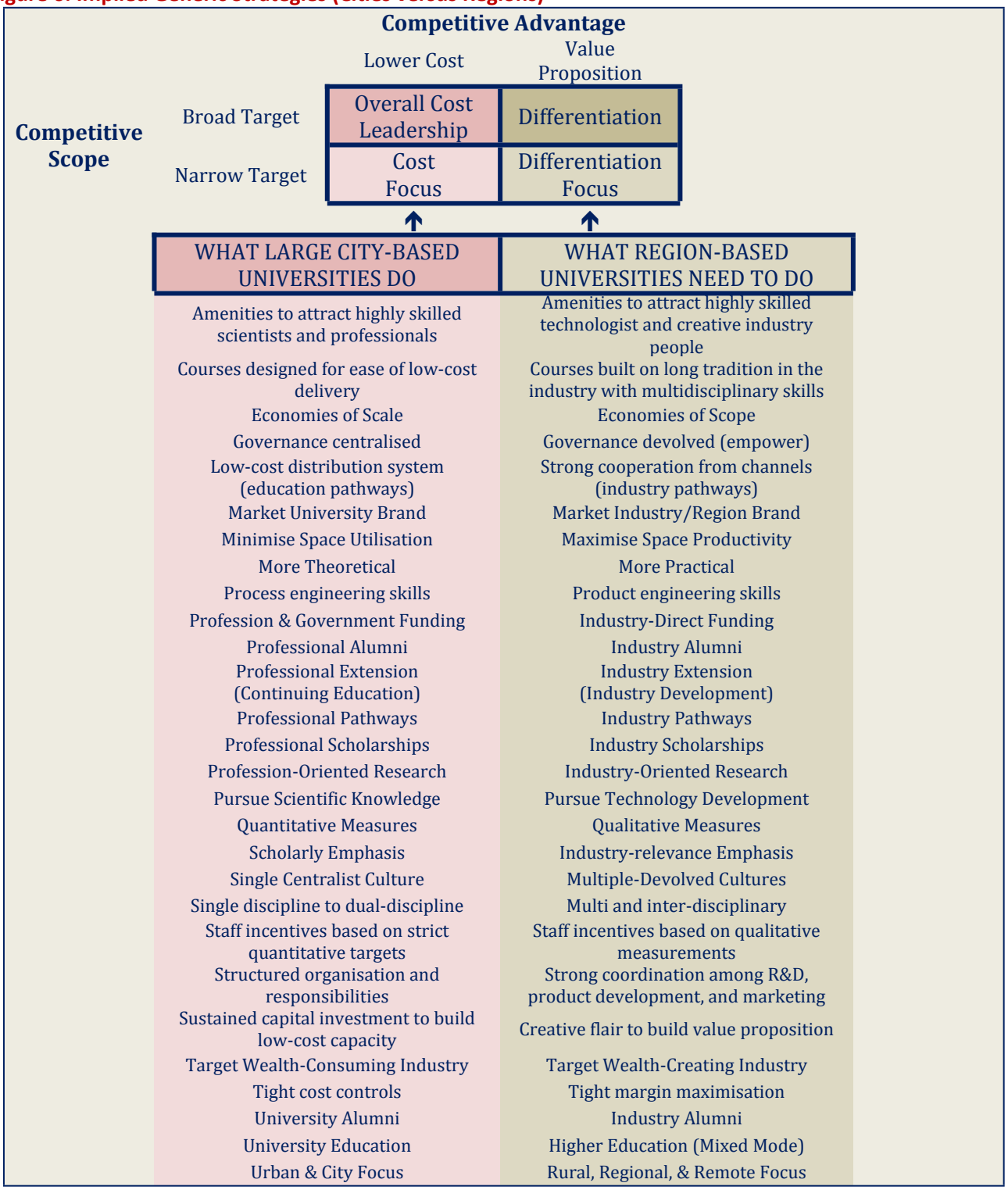
Regional Paradigm (Seek Economies of Scope)

Curtin Muresk campus nearest town Northam has 9,000 residents)

Since 1926

Figure 6: Implied Generic Strategies (Cities versus Regions) below compares different competitive strategies and shows those that would best suit a regional university or universities.

Figure 6: Implied Generic Strategies (Cities versus Regions)



The following issues highlight the nature of problems to overcome, challenges that need addressing, and finding and acting upon solutions to them all.

6.5.3 Industry Attractiveness

Most major universities blame and cite decrease in demand for students as their reason for contracting or closing regional campuses. Most universities play no role in stimulating demand for students beyond their usual annual University 'brand' marketing efforts around the time graduating high school students must declare their course preferences at Universities for the following year. Universities rely mostly on 'unstimulated' student demand for their courses, and adjust their resources accordingly.

If students perceive low industry attractiveness for farming and related value-chain (agribusiness), it is not the fault of regional campus operators [because they simply do not have the resources to do anything about it]. The fault is widespread, but solvable (Primary Advocates Pty Ltd, 2011).

6.5.3.1 Accountability for Industry-Education Outcomes

Who is accountable for the situation we find ourselves in today? Where is the metric to measure the effectiveness of the dollar invested in higher education? Australia's two largest industries simply cannot get enough graduates, and our publicly funded universities are reducing their supply of ag-graduates.

6.5.4 Conclusion

It widely agreed that large city-based tertiary education institutions cannot manage the challenges posed by regional campuses, whether industry-based or not. To a lesser extent, this applies to city-based ag-faculties too. Thus, it is also evident that city-based tertiary education institutions cannot manage the challenges posed by meeting the education and training needs of Australia' mainstay wealth-creating exporting industries. The evidence around Australia shows, repeatedly, that they cannot. This is because:

1. The costs or operating them are perceived to be too high (without tied funding supplementation).

2. The higher education sectors (universities in particular) are rewarded for enrolling low-cost students under the Bradley model, i.e. a funding bias exists for low cost to mount courses.

3. The *wealth-consuming hegemony* problem exerts itself over the regional/high-cost industry operations.

4. Executive managers simply are not skilled enough to allow different cultures to exist in the same organisation (i.e. centralist controls invariably exert themselves over time).

A number of other candidate solutions relevant to this inquiry are canvassed in (Duncanson, Robert Roy, 2010).

6.6 TOR 3: Solutions to Address the Widening Bap between Skilled ag-labour supply & demand

As the reader will observe, the solutions proposed by this submission to address the issues under consideration by this Inquiry are presented as recommendations and numbered sequentially throughout the body of the document. The recommendations that follow are additional to those.

6.6.1 TOR1: Adequacy of Funding and Priority by Governments

RECOMMENDATION 14	*Establish, over 10 years, an industry-governed A$1 Billion **Australian Agribusiness Advancement Trust** (AAAT), a protected capital trust fund, to eliminate the recurrent cost of running regional campuses, and provide other financial support to agribusiness tertiary educational institutions.*[12]

6.6.2 TOR2: Reasons and Impacts of Decline in Ag-Education Facilities

RECOMMENDATION 15	*The Commonwealth, State and Territory governments legislate and regulate the tertiary agricultural and agribusiness education via national policy frameworks agreed by the Agricultural Ministerial Council (not Educational Ministerial Council).*
RECOMMENDATION 16	*The Commonwealth Government must require more public transparency and reporting in tertiary education vis-à-vis:* *a. Enrolment preferences, enrolment, and graduation rates in higher education;* *b. Industry consultation mechanisms, standards, and outcomes; and,* *c. Auditable and audited adherence to legislated functions (particularly in relation to the Nation's and the State's major wealth-creating industries).*
RECOMMENDATION 17	*That the Commonwealth Government should address structural issues within the Australian agribusiness sector and invest in capacity building and development activities by creating new organisations to better reflect contemporary industry needs, including the following:* *1. **Agribusiness Association of Australia (AAA):** Assist in the revamping of this existing organisation to move beyond a professional networking group to one that can become a professional agribusiness standards setting and monitoring group.* *2. **Agribusiness Alumni Association Inc. (AAAInc.):** Bolster this fledgling umbrella group to leverage all international networks of agricultural and agribusiness industry-oriented alumni groups. These are the future leaders of the industry.* *3. **Agribusiness Council of Australia (ACA):** Drive the establishment of a new peak-industry lobby group capable of effectively representing the legitimate interests of the entire agribusiness sector value-chain (to ensure a global systems approach involving participants from raw material accumulators to producers to consumers to waste recyclers).*

[12] This fund should be funded by contributions of one-third each by the Commonwealth Government, State Governments, and Industry.

4. **Agribusiness Leaders Convocation (ALC):** Sponsor the continued development of agribusiness leaders' forums in all jurisdictions until they are self-sustaining and become a regular feature of the agro-political landscape.

6.6.3 TOR4: Impacts on Agricultural Research

The Inquiry should note that the problems concerning agricultural research are international in expression. There are shortages everywhere.

6.6.4 TOR5: Impacts of Labour Shortages

The Inquiry should note that the problems concerning skilled agricultural graduate labour shortages are international in expression. Shortages are particularly pronounced in western economies. Increasingly, multinational agribusiness firms source post-graduate at premium prices, or focus on retaining existing skilled staff. Either way, their labour costs are rising.

6.6.5 TOR6: Incorporation of Animal Welfare Principles

The Inquiry should note that the education of ethics (and contemporary animal welfare principles as a subset of teaching and learning effort about ethics) can be separate to the research activities thereto. Most research-oriented higher educational institutions (universities) have "Research Ethics Committees". Those committees may or may not have terms of reference for research ethics inculcated into their teaching and learning programs. It is also one thing to have a policy about 'ethics', and quite another to appropriately action it.

6.6.6 TOR7: Other Related Matters

RECOMMENDATION 18	*The Commonwealth Government should review the way industry economic performance statistics at gathered by the Australian Bureau of Statistics; with future statistics gathering based upon contemporary value-chain approaches.*

6.7 TOR 4: THE IMPACTS OF ANY SHORTAGE ON AGRICULTURAL RESEARCH

6.7.1 Key Points

6.7.1.1 Decline of Public Funding for Agricultural Research

The shortage of agricultural and agribusiness graduates reduces the capacity of Australia's agricultural research effort and hampers the ability to increase research funding. This "*Catch 22*" is a significant problem to be overcome should governments and or industry decide to increase future investments in agricultural research. It implies a need for adroit coordinated management involving (a) increased funding, and (b) increased graduation rates in order to undertake the required research.

However, it is likely that the original impetus for the decline in agricultural research levels are the decline in public funding, since historically that is how most agricultural research in Australia was done. Developing and rebuilding industry research capacity is much harder than destroying it.

Destroying industry research capacity (whether intended or not) is economic, social and environmental folly.

Regardless of whether future increases in agricultural research funding are substantively public or private, little will be achieved without attention to increased graduation rates – without it future investments in research will be suboptimal.

6.7.1.2 Benefits of Agricultural Research

There exists a range of research evidence that extols and quantifies the benefits of agricultural research in term of return on investment. Broadly, consumers receive two-thirds of the benefits, and producers receive one-third of the benefits arising from the research.

If the prime motivation of policy makers is to minimise future rises in food prices, then the best way to do this would appear to be to invest firstly in increasing graduation rates, and thence secondly increasing the levels of agricultural research, either public or private funded, or preferably, both.

6.7.1.3 The Nature of Agricultural Research

Primary Advocates Pty Ltd perceives a need to address the nature of the agricultural research 'industry' in Australia today. Whilst understanding 'how' is done is complex, in general we believe that is characteristically more "supply-driven" in nature, not "demand-driven". There are many exceptions to this observation, however we believe that industry responds to what is available within the 'research industry' (which is mostly public in origins), rather than to drive industry research needs in a more systematic and strategic way.

This is yet another powerful strategic argument to underpin the notion that ag-graduate rates underpin all research efforts whether public or private in nature. The greater pool of talent available to the nation, will contribute to a heightening in 'strategic thinking' about how agricultural research is best conducted.

Primary Advocates Pty Ltd would 'agvocate' that research 'buyers' of agriculture and agribusiness research are not well served by its current peak industry bodies in this regard. Considerable attention needs to be placed on making far better use of industry 'buying power' than has hitherto been the case. This will undoubtedly results in better financial and strategic outcomes for the industry. Again, this is an argument about how to achieve industry-relevant outcomes for research, as opposed to university-relevant outcomes: the difference is quite profound.

As a first step, greater attention must be paid to reforming the 'research acquisition process' by industry, inclusive of bolstering tender documents and other related contractual provisions. The buyer process must be primarily about 'strategic industry needs', more so than other needs. At first glance, this seems a trite thing to say, but the almost total absence of university generated industry research needs analyses (and thus industry research prioritisation as endorsed by industry) goes to evidence this contention.

The predominant 'research procurement model' in Australia today is to call for research proposals by submission, and select the best available. However, that does no guarantee industry actually gets research proposals to meet its strategic research needs. Of course there are notable exceptions to this tenant, but our contention is that supply-driven approaches predominate, and ultimately that is not strategic and therefore of less desirable economic impacts than it could be.

Australia's agribusiness sector needs to get itself into the driver's seat in this regard, and stop being a passenger.

6.8 TOR 5: The Economic Impacts of Labour Shortages on Export Oriented ag-Industries

This submission does not address this term of reference directly. See TOR 4 above, and the body of the submission.

6.9 TOR 6: The Incorporation of Animal Welfare Principles in Agriculture Education

6.9.1 Key Points

With widespread shortages in tertiary agricultural and agribusiness education and training graduates and funding, with some exceptions, it is difficult to envisage sufficient resources being made available specifically to address animal welfare issues. Except in specific veterinary and animal husbandry course and units, precious surplus resources are available to bolster academic emphasis on animal welfare matters. This is because of the widely interdisciplinary nature of agricultural and agribusiness courses – the curricula is already very full.

Notwithstanding that, there exist a valid argument and widespread need to include the study of the more generic area of 'ethics' within the agricultural and agribusiness disciplines. For example, study units addressing the ethics of cloning, gene substitution, etc. Animal welfare matters are a sub-set of the study of 'ethics' more generally, and a wider coverage of the profession (and therefore the national 'ag-culture') would be achieved by adding units revolving around the teaching and learning of 'ethics', of which animal welfare would form an important part.

6.10 TOR 7: OTHER RELATED MATTERS

6.10.1 High Entry Barriers to Higher Education in Australia

6.10.1.1 Key Points

Private sector solutions face a daunting array of national higher education protocol standards, if they wish to enter the education sector in any meaningful way and become registered higher education institutions, and have their courses properly accredited. It should be noted that these standards form the basis of the quality underpinnings of the Australia tertiary education system, and are therefore valid.

However, the standards were developed by the existing tertiary education system participants, and some degree of vested interest is inculcated within them (since it makes it harder for new competitors to enter the business).

These standards, although necessary and indeed desirable, do form a high entry barrier to private sector institutions wishing to enter the sector. These high barriers incur, at about a minimum a $1m 'start up barrier' for new industry participants. This start-up cost 'entry barrier' should be borne in mind by policy makers wishing to create conditions within which private sector (industry) are encouraged to participate in the Australia higher education sector in particular.

6.10.2 The Myth of "Academic Freedom"

Over time, Australian universities are increasingly being managed as corporations. Often, a common retort to private sector solutions such as the notion of 'industry-governed' universities is that academics within them will lose their 'academic freedom'. Under corporatized approaches to university executive management, increasingly the notion of academic freedom is becoming a myth.

For example, over two years since Curtin University announced the withdrawal from the Muresk campus, no Curtin University academic has ever been quoted in the press extolling views other than the Curtin University line, presumably for fear of losing some employment benefit or other.

Accordingly, the retention or protection of academic freedoms is no longer a valid reason to reject the notion of industry-governance of Australia's tertiary education institutions.

6.10.3 Educational Pathways

Much is made of industry educational pathways in agriculture and agribusiness education. In theory it should be possible to move seamlessly from Kindergarten to PhD studies, from institution to institution. However, in practice this remains problematic.

It is every institutions absolute right to determine the entry criteria for students wishing to enrol. It is one of the few strategic levers available to educational institutions to enable them to position themselves in the education market place. Therefore, despite the rhetoric and nature of informal agreements relating to educational pathways from one institution to the next, such agreements should not be relied upon as the means to establish industry education and training pathways.

Policy makers must devise educational systems that assume blockages will occur from one level or education institution to the next. The key thing is to ensure an industry is attractive enough that sufficient students wishing to enter it will qualify in sufficient numbers to ensure industry's overall needs are met (in terms of quality and quantity).

In this regard, efforts to improve industry attractiveness are more likely to have a lasting effect on graduation rates than attention to pathway agreements between educational institutions at any level.

6.10.4 Industry Fragmentation

It is said that there are over 4,000 agricultural groups and organisations in Australia today. To add to that, a plethora of agribusiness groups (the number is much higher), and then add the many private agribusiness companies that make up the sector. There are literally tens of thousands of agribusiness interest groups and organisation that do not have any direct representation via an appropriate peak industry lobby group.

Clearly, the agribusiness sector in Australia is highly fragmented, and diseconomies of effort in dealing with the sector are commonplace; the norm in fact. This gives rise to bad habit of 'opinion shopping' and cogent methods for governments and academics to genuinely engage with the sector in ways that would see statistically replicable results are non-existent. The fact that universities teach statistics regularly does not mean that their administrations practice it with any degree of rigour.

Until this problem is addressed, policy development will remain poorly targeted and ineffectual because no one can say with a degree of relevant statistical confidence what industry actually wants. Industry consultation results must be genuine and replicable to form a sound foundation for deriving agribusiness industry development policy. The best way to overcome industry fragmentation is to ensure proper statistical sampling, and eradicate (by regulation if necessary) any consultations involving 'opinion shopping'. This requirement should apply to any party: government, academe, or industry.

6.10.5 Agribusiness Role in Food Security, Bio-security, and Natural Resource Management

Much is made of the policy areas of food security in recent times (e.g. the Prime Minister's announcement at the recent CHOGM concerning the establishment of a 'Centre for Food Security' primarily to assist African nations).
It is not possible to devise and action a cogent national food security without the involvement of agribusiness. This is simply because its ultimate implementation is mostly reliant upon agribusiness – our food system is exactly that, a system of many parts which ultimately acts holistically to feed its population. There can be no cogent government or private sector food plan or food security policy without fully engaging with the entire agribusiness system.

It is often said that for all the public resources devoted to environmental protection and natural resource management in Australia today, that ultimately the vast majority of effort in actually actioning it is with the private sector (i.e. private land owners sand leases). This also applies to food security, bio-security and to a lesser extent national security policy – it is simply not possible to action it systematically without engaging with the private sector. Therefore, they must be engaged genuinely in any consultation process from the outset, and through all stages of development if on-the-ground implementation is to be actioned optimally.

Regrettably, this is not the case in Australian agribusiness today.

7 BIBLIOGRAPHY

1. Cribb, J. (2010). *The Coming Famine: The Global Food Crisis and What We Can Do To Avoid It* (1st ed.). Canberra, ACT, Australia: CSIRO.

2. Duncanson, Robert Roy. (2010). *Australian Industry-Governed University Colleges.* Perth, WA: The Muresk Old Collegians' Association Incorporated.

3. Duncanson, Robert Roy. (2011). *Why Agribusiness Matters.* Perth, WA: Agribusiness Council of Australia.

4. Gray, I., & Lawrence, G. (2001). *A Future for Regional Australia* (1st ed.). Oakleigh, VIC, Australia: University of Canbridge.

5. PMSEIC. (October 2010). *Australia and Food Security in a Changing World.* CSIRO, Prime Minsiter's Science Engineering and Innovation Council. Canberra ACT: Australia Governemnt.

6. Porter, M. E. (1980). Competitive Strategy: Techniques for Analyzing Businesses and Indusries. New York, New York, USA: The Free Press.

7. Porter, M. E. (1985). Competitive Advantage: Techinqiues for Creating and Sustaining Superior Performance (Vol. 1). New York, New York, USA: The Free Press.

8. Porter, M. E. (1990). *The Competitive Advantage of Nations* (1st Edition ed., Vol. 1). London, UK: The Macmillan Press Ltd.

9. Primary Advocates Pty Ltd. (2011). *MOCA's Agribusiness Rejuvenation Strategies.* The Muresk Old Collegians' Assoacition Incorproated. Perth, WA: The Muresk Old Collegians' Association Incorporated.

8 ATTACHMENT: SUMMARY OF TERTIARY AG-EDUCATION POLICY IN W.A.

GOVERNMENT AGENCY	PROPOSED SOLUTIONS TO THE "MURESK ISSUE" (I.E. SUPPLY OF GRADUATES TO WEALTH-CREATING INDUSTRIES)
Commonwealth Department of Agriculture, Fisheries and Forests (DAFF)	• No agribusiness TE[13] education policy (incl. forestry & fisheries) • No national food plan (including food security). • Identifies partial problems, no actions to fix (agribusiness omitted) • Blames industry for most failings
Commonwealth Department of Education, Employment and Workplace Relations (DEEWR)	• University funding solely on basis of enrolled students (few other criteria). • No consideration of main wealth-creating industry needs (no strategy to fix) • Some allowance for 'regional loading' but never enough to cover full costs of regional operations
Industry-Agribusiness Value-Chains Industry-ITC Industry-Mining & Petroleum Value-Chains Industry-Tourism	• Estimated 60,000 graduate vacancies nationally (~6,000 WA) • Growth hampered by graduates shortages (no data) • Estimated 260,000 graduate vacancies nationally (~80,000 WA) • Unmet demand for graduates (no data), skills shortages
WA Colleges of Agriculture (Secondary Ag. Schools)	• Full to overflowing. Pathways restricted by changeable entry criteria to HE institutions.
WA Dept. of Agriculture and Food (DAFWA)	• No agribusiness HE policy • Cannot find enough graduates for own staff replacements
WA Dept. of Education (DoE)	• Not concerned with 7% problem (concerned with primary & secondary school levels only) • School counselling services not connected to industry needs (K to Y12). Minimal pathway work to tertiary education.
WA Dept. of Education Services (DES)	• No HE policy for Western Australia • Does not audit or 'performance assess' any higher educational institution (despite being WA's only HE regulator)
WA Dept. of Fisheries	• No fisheries TE policy
WA Dept. of Forestry	• No forestry TE policy
WA Dept. of Regional Development & Lands (DRDL)	• No Departmental "Regional Development" TE or HE policy • Regional Development Council "*Rural & Regional HE Policy*" one year old, but not promulgated (mostly internal to DRDL)
WA Dept. of Training and Workforce Development (DTWD)	• No TE policy for Western Australia (i.e. beyond VET sector) • 7% problem is likely to be worse in the VET sector (no workforce planning) • Proposed solution wholly within purview of DTWD
WA Dept. State Development (DSD)	• No industry-oriented TE policy • No whole-of-Gov't oversight to ensure mainstay industry needs met
WA School of Mines (Kalgoorlie) (WAM)	• Restricted by Curtin University directives
WA- University of Western Australia (UWA)	• Downgrade (declining enrolments and graduation rates)
WA-C Y O'Connor Institute (CYOI) [Wheatbelt Region of WA]	• No application to achieve TE/HE status or course • No record of accomplishment in agriculture (<5% VET), no TE • Wants Muresk campus free of encumbrances for C Y O'Connor use • Proposed solution wholly within purview of CYOI
WA-Curtin University (Curtin)	• Downgrade (and withdraw from Muresk)
WA-Edith Cowan University (ECU)	• No substantive role in wealth-creating industries
WA-Murdoch University (Murdoch)	• No substantive role in wealth-creating industries
WA-Muresk Institute (Muresk)	• Restricted by Curtin University directives
WA-Notre Dame University (NDU)	• No substantive role in wealth-creating industries
WA-Rural and Regional Education Advisory Committee (RREAC) - administered by DES	• There is no WA State HE Policy (therefore context) • Only recent receipt of 'draft' RDC Rural and Regional HE Policy
WA-Wheatbelt Development Commission (WDC)	• Wants Muresk campus free of encumbrances for region. • Proposed solution wholly within purview of CYOI

CONCLUSION: THERE IS NO 'STRATEGIC' WHOLE-OF-GOVERNMENT APPROACH TO TERTIARY EDUCATION (FOR WA INDUSTRY)

[13] VET & HE = i.e. TE: Vocational Education & Training (VET) + Higher Education [Universities] (HE) = Tertiary Education (TE)

9 CONTACT US

ABN 60 105 778 809

The Managing Director
Primary Advocates Pty Ltd

P.O. Box 243
Melville WA 6956
0427 176363

roy.duncanson@primaryadvocates.com