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To: Productivity Commission
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Submission on: **The Issues Paper (Feb 2016) for the New Models of Tertiary Education**

From: DairyNZ

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1. INTRODUCTION

- 1.1 Thank you for the opportunity to respond to the issues paper released by the Productivity Commission on February 2016.
- 1.2 DairyNZ acknowledges the 78 questions but prefers to accept the offer to comment holistically rather than answer each question individually. Our perception is that tertiary education has many moving parts (as the paper shows). Together these create a sum that is greater than its parts.
- 1.3 We would also like to make an initial comment on methodology. We appreciate that any analysis must apply a framework to reduce complexity and order it into a manageable discourse. However, we think it is important to recognise inevitable limitations of that framework. Productivity (even when defined as *total productivity* in comparison to partial productivity such as labour productivity) is an economic measure. The discipline of economics brings strengths but also has weaknesses. It is one among many competing but valid analytical disciplines. Fundamentally, no one discipline can comprehend the full range of human activity¹, which is the rightful subject matter of tertiary education.
- 1.4 Even within its own terms, productivity is limited to the so-called "measured sector". This sector approximates the "business" or "market" sector, and naturally focuses on businesses that seek the best mix of resources to exploit market opportunities and earn profits. It excludes industries in which outputs are not adequately measured independently of inputs, such as government non-market activities like education. Statistics NZ estimates the measured sector is around 75% of the economy.
- 1.5 We make these cautionary statements because we believe the thinking required for new models of tertiary education must be wider than our current thinking. We cannot solve our problems with the same thinking we used to create them².
- 1.6 As an instance, our industry strategic plan has two equal parts known as 'competitive' (profitable) and 'responsible' (sustainable)³. We are seeking currently to find a better balance between the two. Some factors now at play, such as reducing the intensity of inputs like supplementary feed and fertilizers in order to re-emphasize grass pastures as a sustainable and competitive output, fit into a classical economic framework. But other factors which we are giving a lot of attention to, such as developing farmer wellbeing and resilience, which in the longer term may have a greater impact, fit less easily into that framework.

¹ Perhaps best expressed by Hamlet's famous line: "There are more things in heaven and Earth, Horatio, / Than are dreamt of in your philosophy."

² Einstein

³ *Making Dairy Farming Work For Everyone*, Strategy for Sustainable Dairy Farming, 2013 -2020

2. WHAT DOES THE DAIRY INDUSTRY SEEK FROM THE TERTIARY EDUCATION SYSTEM?

2.1 Breadth of stable supply

- 2.2 In brief, the dairy industry seeks a stable supply of the comprehensive range of skills and knowledge which underpin the wellbeing and functionality of rural communities.
- 2.3 This includes the skills and knowledge that support rural businesses *of all kinds*, including construction, engineering, logistics and transport. It also needs rural health and education services, and environmental, accounting, banking and insurance services. We need researchers and applied scientists, and the skills that add value to farm produce, and market and sell it domestically and overseas.
- 2.4 As a consequence, we support the full spectrum of subjects that are offered by tertiary education (including the Arts and Humanities). It would be counter-productive for tertiary education to be narrowed by an exclusive focus on utilitarian objectives, and our interest is not on a singular supply of agricultural education. Our dairy industry strategic plan calls for a wide set of social, environmental and ethical skills and knowledge which support development of a deep understanding of the business trade-offs between growth and sustainability.
- 2.5 What we do wish to see is that the skills and knowledge for competitive and sustainable land management, which are highly important for New Zealand's economy and society, have a corresponding profile in the tertiary education system.

3. Depth

- 3.1 In addition to breadth, the dairy industry is also looking for a coherent depth of skills and knowledge, including a re-evaluation of importance of practical skills.
- 3.2 In the current model of tertiary education, institutions typically decide what constitutes a coherent body of knowledge, with an inbuilt driver to preserve the traditional composition and size of qualifications. However, what makes up a coherent body of knowledge is changing rapidly and will continue to do so. Equally, what is coherent and deep for one person is not the same for another even in seemingly parallel work environments. The system has to become a lot more agile and tolerant to accommodate this dynamism and diversity, with a different understanding of qualifications and credentialing (see later).
- 3.3 We are seeking a greater industry input into what makes up a coherent body of knowledge and the practical skills that can apply it. Practical skills have too often been left to the industry to develop, with the formal education concentrating on theory, leading to a tacit acceptance that practical skills are secondary to the theory. Yet there is strong evidence that many/most people learn kinaesthetically. Among our aims for a stronger public/private partnership is a better bridge between thinking and doing.

4. New models for industry education and training

- 4.1 New models of tertiary education will need much greater support for industry education and training.
- 4.2 By 'industry education and training' we do not mean the current model of ITO-led training. We support the Primary ITO but are aware that its operating model is severely constrained. The ITO is restricted to sub-degree levels of the qualifications framework, and hampered by the rigid rules which govern credentialed qualifications. Most significantly, it is constrained by the STM funding rate, which is one third of the SAC funding rate accessed by TEIs.

- 4.3 The ‘poor cousin’ status of current industry training is apparent in Figure 28 on page 56 of the issues paper. *Other Tuition Funds* (which encompasses secondary/tertiary programmes aimed at employment and work-related support for the disadvantaged) amount to \$359M, compared to \$2,024M for SAC funding for TEIs (i.e. around 15% of the total tuition funding).
- 4.4 This disproportion is apparent in the thin red bar for industry training in the bar graph of Figure 30 on page 61. Tuition loans and the write-off of 39.35 cents for every dollar lent further advantage TEI students compared to industry trainees, who are not eligible for loans (although, in some cases, they are subsidized by their employers).
- 4.5 In place of this severely limited current model we propose that education and training for the primary industries (our first point of focus) should be framed around a public-private partnership, whereby the primary industries and Government co-invest into a single consolidated fund to support the full compass of tertiary education for the primary industries. We envisage this embracing a wider definition of tertiary education to include supporting demand and focusing on successful outcomes rather than outputs – see below. Once piloted and evaluated we believe this model could be migrated to other industries, disciplines, or sectors such as Maori education.
- 4.6 Our proposed public/private fund for the primary industries would be overseen by a joint industry and Government governance body and apply a new hybrid SAC/STM funding rate to all tertiary providers (including universities) which offer primary industry related education and training. This governance body would oversee the introduction of new credentialing rules.
- 4.7 This implies a shift away from the current homogenous tertiary education system into more granular customer-focused arrangements. This will be more untidy than the existing, ‘single system’, but that system is not working. Administrative costs do not necessarily have to increase, because the existing system houses myriad advisory structures and committees, some of which can be elevated into governance roles.
- 4.8 The existing ‘single system’ pays lip service only to the great advantage it offers – of facilitating life-long learning through seamless, flexible credit accumulation and transfer across a range of providers, over an extended period of time. The reality is that the separate quality assurance system for universities consciously segregates them from other providers. Similar barriers have been erected between ITPs and PTEs, despite the withdrawal of the delegated quality assurance responsibility for the ITP sector.
- 4.9 Employers have also undermined a working credit accumulation and transfer system by their unwillingness to look beyond standard qualifications (“the ones I grew up with”) when recruiting.
- 4.10 DairyNZ suggested the approach outlined in paragraphs 4.5 to 4.7 above to the Tertiary Education Commission in 2014, with the offer of a joint working party to pilot and evaluate it, but achieved little traction.

5. Balance of public and private investment

- 5.1 The reliance of the dairy industry on the wide range of skills and knowledge which underpin the wellbeing and functionality of rural communities suggests to us that private and public benefits of tertiary education are deeply entwined. The spill-overs both ways are extensive and subtle.
- 5.2 Most economic frameworks attempting to navigate this complex relationship conclude that industries and individuals capture a significantly higher proportion of the benefits than society at large. The current ratio of public and private investment for tertiary study, which the issues paper cites as 82:18, is not consonant with that conclusion. Public investment substantially exceeds private investment.

5.3 However, we note that current funding model for industry training operates on a 70/30 split. The industry cash contribution of 30% is shared typically between the industry and the trainees (although in varying proportions according to the industries involved⁴).

5.4 Overall, DairyNZ considers the 70/30 ratio of current industry training is a reasonable balance, given the opacity of public versus private benefits. However, we believe greater involvement of the private sector in governance would improve the way in which this money is consolidated and invested.

6. Demand

- 6.1 Supply is obviously linked intimately to demand, yet the current tertiary education system appears to underestimate and undervalue the dynamics involved.
- 6.2 Broadly, DairyNZ identifies three segments in the tertiary education system: *demand* for education, *delivery* of education, and *outcomes* from education (reflecting the familiar nexus of inputs-outputs-outcomes). Most resources and energy in the current system are concentrated in the middle segment of delivery (i.e. the delivery of teaching and research outputs). Comparatively less attention and resource is applied to the other two, equally important, segments. Demand is left largely to the market, and is characterised by obvious market failures in the information and support needed to enter the system. Similarly, the outcome segment is undermined by the focus of education assessment on success in the course rather than successful application in the field (putting the learning into action).
- 6.3 DairyNZ believes a greater proportion of a consolidated public/private tertiary education spending should be directed to creating demand and supporting people to enter the system, and to assessing the longer term outcomes of education. This would be a large scale shift in the current model of tertiary education.

7. Retention and development

- 7.1 One of DairyNZ's key strategies is to attract, develop and retain talented people. We provide extensive on-job education and training through our extension services delivered by approximately 45 consulting officers covering nine regions, who arrange around 2,000 events nationally each year with farming communities (including discussion groups, field days, technical events and demonstration farms). We also partner with the Primary ITO's blend of on-job and off-job education and training. Our aim is to constantly up-skill farm businesses to meet rapidly changing circumstances.
- 7.2 Whilst carrying out this activity, we observe that the great majority of tertiary education is directed into one-off, pre-entry qualifications, delivered by institutional providers (TEIs) rather than continuous, on-job education. These pre-entry qualifications are typically packaged into 3 or 4 years of study, which maximise an institution's income while (hopefully) providing the consumer with an entry ticket into the labour market⁵. However, the shelf-life of these qualifications is limited, and increasingly becoming shorter. In acquiring these qualifications students effectively use up their lifetime quota of public subsidies at the front end.
- 7.3 Given the rapid changes experienced within a working life, this seems the wrong emphasis. DairyNZ supports greater weight being given to short courses and programmes delivered 'just-in-time' across the full spectrum of a working life. This implies an education entitlement – not so much to promote consumer choice between providers (as has been the argument for school 'vouchers') – as a choice of when and how to invest, to maximise adaptability and productivity across a working life.

⁴ E.g. the Horticulture industry, which has many small component sectors such as vegetable growing, turf culture, pipfruit and kiwifruit, cannot make an industry-wide contribution and relies on trainees paying tuition fees for its 30% contribution

⁵ There are exceptions. Massey University reduced its four year Ag-science degrees to 3 years because it considered the longer qualifications were unprofitable

7.4 An entitlement for the working life implies a new quantum of funding as well as a new distribution mechanism. DairyNZ believes the Productivity Commission should consider this increased public and private investment, rather than rejecting it a priori. The demands for education have changed today in ways that parallel the extension of free, publicly funded primary education into secondary education in the last century. Other sources to increase the quantum of funding are discussed below.

8. Better balance of funding

- 8.1 Several other ingredients are needed for the new models suggested above. One is to rebalance current tertiary funding to close the gap between STM and SAC funding rates, which is divisive and creates territorial boundaries between TEIs and ITOs.
- 8.2 The current imbalance is usually ascribed to the Crown's ownership responsibility for TEIs (supporting the upkeep and renewal of their infrastructure). One way to address this is to consolidate TEIs, as is happening in the ITP sector. A similar approach could be taken in the university sector.
- 8.3 Lincoln and Massey Universities could complement rather than compete in the primary industries. This would consolidate capability and create a shared scale that can maintain viable class sizes and attract the high calibre specialised staff. A complementary approach could generate some savings through rationalising some staff and curriculum, although two campuses and administrative/management teams would continue.
- 8.4 A deeper rationalisation across the entire tertiary sector could focus on retiring and selling some of the 'bricks and mortar' of all the TEIs, in line with new digital, virtual technologies for teaching and learning (as Unitec is doing in Auckland). The Government as owner could ask each TEI for a long term plan to streamline their physical assets. Savings could be redirected into innovative teaching and learning, and a proportion returned centrally to support a new hybrid STM/SAC funding rate.
- 7.4 Reducing the burden of the physical infrastructure of TEIs is likely to aid innovation in teaching and learning. It is noticeable that a number of ITPs have purchased PTEs in recent years to give them greater flexibility.

9. Credentialing

- 9.1 A second obstacle to greater flexibility of delivery is the current concentration of credentialing powers into the hands of TEIs and ITOs.
- 9.2 DairyNZ proposes that new models of tertiary education should extend that power to other bodies which are able to provide credible education and training. This would facilitate a more seamless interaction of (so-called) non-formal learning and formal learning (assuming that formal qualifications remain a pre-requisite for public funding – a pre-requisite that we question because of the perverse behaviour it generates).
- 9.3 The stumbling block to linking non-formal and formal learning to date has been the perceived lack of education assessment in non-formal learning. However, recent advances in practical-based assessment enable industry-good bodies to conduct valid and reliable assessments. We do not have to require the same model of rigorous validity and reliability that is applied in high stakes assessment, which has limited flexibility and reinforced institutional territorialism. DairyNZ, for example, believes our brand has a high resonance with dairy farmers. We would use the opportunity to increase the focus of assessment onto successful application of learning (rather than restricting it to course assessment).
- 9.4 A more radical new model could shift away from using credentials as a proxy for quality and a pre-requisite for funding. Our experience is that farmer employers and employees generally value the skills and knowledge they receive, but place a far lower value on achieving a credential.

10. Research funding

- 10.1 DairyNZ appreciates the research and research transfer roles of TEIs, but considers that linking a considerable proportion of research funding to EFTS funding for degree-level qualifications is insufficiently transparent for accountable research or teaching, and unwittingly supports outdated models of institutional delivery. In principle, DairyNZ supports the separation of teaching and research funding, while recognising the role of scholarship in the Humanities would need to be satisfactorily managed. An enhanced PBRF would sharpen research outputs.
- 10.2 OECD figures on research indicate that New Zealand spent 1.3 per cent of GDP on research and development in 2013, compared to the OECD average of almost 2.4 per cent. This gap is caused largely by underinvestment by the private sector, and not with Government funding, which is close to the OECD average. DairyNZ is an exception to this, investing over 30% of its levy funds in research. We acknowledge our close partnership with Government through the Primary Growth Partnership (PGP) programme and want to see this continue into a new round of co-investment.

11. Recommendations on new models

- 11.1 DairyNZ believes the policy framework for tertiary education has become stuck on outdated models of delivery which are unresponsive to the market. Public subsidies continue to be channelled through institutions, which are incentivised to engage full-time students in pre-entry programmes of increasing duration⁶. Undergraduate education which develops generic thinking and communication skills is highly valuable, but not at the expense of investment in flexibly credentialled continuous learning which supports people to upskill or reskill across their lifetime.
- 11.2 DairyNZ would like to see new models of tertiary education that use joint public/private governance arrangements to co-develop the strategic priorities for sectors, focus more resources on revitalising industry education and training, and use a new hybrid funding rate to provide greater emphasis on creating and assisting demand, and assessing the application of the outcomes of learning. Funding should be tied to learners not providers.

12. ABOUT DAIRYNZ

- a. DairyNZ is the industry good organisation representing New Zealand's dairy farmers. Funded by a levy on milksolids and through Government investment, our purpose is to secure and enhance the profitability, sustainability and competitiveness of New Zealand dairy farming.
- b. We deliver value to farmers through leadership, influencing, investing, partnering with other organisations and through our own strategic capability. Our work includes research and development to create practical on-farm tools, leading on-farm adoption of best practice farming, promoting careers in dairying and advocating for farmers with central and regional government. For more information visit www.dairynz.co.nz.

⁶ There are increasing numbers of conjoint degrees, for example