16 November 2016

New Models of Tertiary Education Inquiry
New Zealand Productivity Commission
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Submission: Draft Report - New Models of Tertiary Education

Thank you for the opportunity to comment on the above document.

The New Zealand Manufacturers and Exporters Association (NZMEA) represents the interests of manufacturers and exporters throughout New Zealand.

The NZMEA is New Zealand's only focused and independent voice for manufacturers and exporters, representing over $6 billion in sales per year, with an export value of around $3 billion. The Association can trace its beginning back to the early history of New Zealand.

The Association also includes in its membership affiliate organisations such as the Wood Processors and Manufacturers Association, E tū (the merged Engineering Printing & Manufacturing and Service and Food Workers Unions), the Heavy Engineering Research Association (HERA), and Plastics New Zealand.

General Comment

The NZMEA and its manufacturing members continue to support the Productivity Commission's inquiry into the tertiary education sector. We believe this review is long overdue and the Productivity Commission is perfectly placed to conduct this work in a balanced, extensive and data-driven way. The NZMEA remains willing to work with the Productivity Commission throughout this process to provide further feedback and input from the manufacturing industry.

We do, however, have some concerns that the draft report currently lacks the necessary focus on meeting current and future skill needs of the manufacturing industry and wider productive sectors of New Zealand's economy.

As we outlined in our original submission, manufacturing in New Zealand needs a highly skilled workforce to stay globally competitive, adapt to and implement new technology, and drive innovation in products and processes.

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The lack of skilled workers is an often-cited reason holding many manufacturing businesses back from further growth. Unlike other factors under the direct control of business owners and managers, the supply of skilled workers is largely beyond their control, apart from taking on apprentices and other in-house training activities. We support measures that further encourage and support businesses to take on and train new apprentices. Government and its agencies fund and control the tertiary education sector and have a direct responsibility to link the output from that sector to industry requirements.

The tertiary sector's ability to educate and provide these high-quality workers is vital to the future success of the manufacturing and exporting in New Zealand. These businesses simply cannot survive in the long term without a flow of high-quality workers that match, and even beat those in competing countries – quality staff is an indispensable element for New Zealand manufacturers and exporters to compete globally.

In addition, the manufacturing sector globally is undergoing a digital revolution at the moment, and while there are many uncertainties around what exactly this 'revolution' will involve and how it will be rolled out in countries like New Zealand, one thing is already certain – it will further increase the level of technical skills (not to mention others) required of manufacturing employees at all levels.

New Zealand already has a lot of potential, in the form of relativity high rates of numeracy and literacy when compared to other OECD countries. A more efficient system that is responsive to both student and business skill needs is vital to make the most of our peoples' talent and innovation, while keeping manufacturing activity, capability and employment in New Zealand.

Keeping that in mind, we do agree that there is an issue with the current funding system for the tertiary sector, where, essentially, students make their own choices on what degrees to pursue and tertiary education organisations get funded for the number of students enrolled in particular degrees and courses – essentially a free-market 'bums on seats' system where the government almost completely abstains from intervention. As demonstrated repeatedly, this system tends to run into 'negative feedback loops' where degrees of 'natural appeal' to students are promoted by tertiary institutions even when it is blatantly obvious that most graduates won't find a job (in New Zealand) – veterinary nursing assistants, for example.

There is also quite a difference in the way some institutions, such as University, are funded compared to industry training institutes providing apprentices – the work both groups make in helping training skilled staff is equally important to most manufacturers.

On that basis, we do have some concerns around the recommendation to make the tertiary education system more student-centric by having funding for institutions come through students via establishing a Student Education Account for every resident.

While a more student-centric system with less influence and control by the state may provide more courses that students are demanding, the vital point is whether is also provides what New Zealand businesses need to grow and innovate as well. This is the key outcome that we would like to see explored further. Given that society spends roughly $2.8bn per year on tertiary education in New Zealand, raised from taxes, we believe it is fair to expect that the tertiary system is tailored to meet the skill needs in our economy, as well as meeting student demands.

Solely relying on students making the right choices when addressing the need to match educational outputs with society's demands has failed to work so far, and we are not convinced that an even stronger reliance on 'market forces' will provide the answer, without a wider view of how this system would meet the needs of society and our economy.

We see how making the system more student centric could help provide innovation in the way education is provided, and there are benefits to having a more adaptive and innovative system in terms of the supply of education. Again, however, what is taught remains important to meeting business as well as student needs.

The NZMEA does not advocate any punitive approaches to regulating student choice of degrees and courses. Government does have the tools on hand, however, to provide financial incentives to influence those choices to some extent – by reducing or waiving course fees for degrees in high demand, for example.

We do agree with the suggestion in the report that careers advice in schools should be reviewed, with significant room to improve and help give students better information to choose their best path.

Comments on Draft Report Recommendations

Competent institutions should self-accredit

We believe quality control in education is important. We do see how the current system could lock in current status quo practises, however, the suggestion of self-accreditation does carry risks that quality could fall. Given recent examples of failure to deliver the quality or quantity of educational services as contracted even under the current system with, obviously, insufficient external supervision and control, we do not see the argument for a further relaxation of supervision and control to be valid.

The core issue we see is encouraging and facilitating institutions to be reactive to the skills needs that businesses currently face. Institutions need a framework with makes them not only responsive to student demands, but that ensures their courses provide students with the skills that can make them as ready for work as possible.

Better prepare students

We fully support the recommendation to review the delivery of career services in schools, to ensure students have the best information possible when making decisions on their future path.

A lack of information on student outcomes and opportunities is a factor contributing to areas of skill shortage not being filled through the education system.

We believe the manufacturing community can help in this area alongside Government to provide information and better highlight the opportunities the sector can provide.

Previous Comments on Tertiary Sector Review

We would like to take this opportunity to reiterate our comments and feedback featured in our original submission.

The primary skills gap in the manufacturing sector exists at the level of (highly) skilled technical workers and manufacturing floor team leaders with qualifications at NZQF Levels 4 to 6, and to a lesser extent graduates at Levels 7 to 9 in technical and business disciplines.

A secondary gap exists in the availability of semi-skilled workers. This gap has strong regional / geographic component and the problem often is a combination of a lack of basic skills at NZQF Levels 1 and 2, sometimes even elementary reading and writing skills, and fundamental employability issues. Rapidly progressing technological developments in manufacturing, however, may provide alternatives to employers where semi-skilled labour is not available. That option is not available where there is a shortage of highly skilled workers.

A root cause analysis of why these shortages shows a multitude of factors, but four components stand out:

1. The replacement of a proven tertiary training system (apprenticeships and, for example, the New Zealand Certificate of Engineering) with the ITO model, which is seen by many of the leaders in manufacturing as a retrograde step. There may be an element of nostalgia involved here, but it is obvious to anyone walking factory floors these days that many of the team leaders and forepersons belong to the last cohort that came out of the 'old system' and replacing them with younger workers with equal or better skills is often a challenge in current settings.
2. A *push* factor: Too many young people and their parents, teachers and other influencers regard attaining a university degree as a preferred option, never mind what the degree is in and what the employment and career opportunities post-graduation may be. Compared to that, they do not see a career in manufacturing that is launched from a tertiary qualification at certificate or diploma levels as attractive. This is based on a perception of pay levels, career advancement opportunities and work environment that is far from reality and fails to recognise the scope of opportunities available in manufacturing. We suggest that fixing that is outside the scope of this review and largely a task the industry itself has to shoulder. However, a government that actively recognises the importance of a healthy manufacturing sector for the sustainable economic development of New Zealand should play an active role in this, too.
3. A *pull* factor: Tertiary institutions, behaving perfectly rationally under the current funding model which incentivises a 'Bums on Seats' approach, are each striving to maximise enrolment in the courses they offer, with scant consideration (or no incentive to consider) of what happens to their 'customers' once they leave. It would not be fair, however, to criticise these institutions for their behaviour. Their behaviour is entirely predictable under government policies that have created an open market in the tertiary education sector, which provides no price signals related to the actual demand in the manufacturing industry, for example. We have a tertiary education system that is largely *output*-focused, rather than being *outcome*-focused. A further aggravating factor of the current funding model is that it focusses much of the energy, innovation

and business development activities of tertiary institutions on international students who provide superior margins to the institution under a highly commercial model of education. Efforts to satisfy the demands of the domestic labour market are seen as much less profitable by comparison. This may also be exasperated by the financial situation a number of institutions have found themselves facing in recent years. There is also improvement in the flow of students around tertiary institutions, for example, around 50% of first year students in UC engineering courses do not go through to the second year, such students could be directly to other courses in engineering and manufacturing fields at politics, rather than seeking a degree in a different field. Once again, the current market approach and competitive nature may be holding such co-ordination back.

The increasing specialisation and sophistication of manufacturing technology and processes has meant that beyond a certain level, skills development can only occur within the manufacturing sector (on-the-job training), or is undertaken there much more effectively and efficiently. What we are seeing very little of, however, is integration between training provided by vocational training institutions, for example, and industry. Nor do we see much systematic effort to co-ordinate on-the-job training activities across a multitude of manufacturing SMEs, each of which engage in their own training activities as they see fit, with little or no external involvement or support to improve the efficiency of their efforts.

A further factor that needs consideration as far as satisfying the needs of the manufacturing industry is concerned. Some of the factors described above are or have been at play not only in New Zealand, but in other countries with high levels of manufacturing activity especially in Europe and North America. The 'resurgence' of manufacturing in these countries means that the shortage of highly skilled workers and graduates in technical disciplines we observe in New Zealand exists globally. Given that New Zealand graduates are generally seen as well trained and highly motivated, New Zealand manufacturers not only compete among themselves for a scarce resource, but also face stiff competition from abroad.

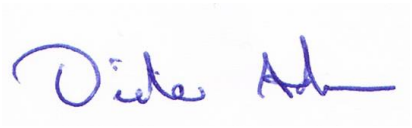
How to fix the problem? This is a complicated issue below are a few elements that would form part of a of a solution we would like to see implemented:

1. A funding model for tertiary education that provides a strong incentive for providers to produce a better match between what they produce and what the economy needs. We are fully aware of the power of choice students have and recognise that tertiary institutions cannot dictate what courses or degrees students enrol in. The government has strong price signals at its disposal, however, and could, for example, reduce or waive tertiary study fees for certain certificates, diplomas and degrees to motivate students to consider tertiary qualifications our economy needs to maintain the momentum of economic development or meet social needs.
2. A more balanced split of investment in universities, polytechnics and institutes of technology to address the current output imbalance in the tertiary sector.
3. A continued focus and extension of general STEM skills throughout the education system. While the secondary elements are out of scope of this review, there should be a focus in the tertiary sector to foster more generalised soft skills that act as necessary starting skills for manufacturing jobs. Such a range of skills and problem

solving abilities will also be required more and more as company's adapt to changing technology.

4. An industry-led, government-supported co-ordinated effort to raise the awareness of young people of the opportunities that exist in the manufacturing sector. The Government's recent *Engineering Education-to-Employment Programme* is a step in the right direction.
5. A significant investment in recognising, formalising and improving the efficiency of on-the-job training in the New Zealand manufacturing sector, which is dominated by SMEs. This will have to include an improvement in the attitude some manufacturing leaders have towards contributing to a more formal training of their employees through apprenticeships and other initiatives yet to be developed. There is scope to improve the support available for those undertaking this training – this could not only provide skills for new entrants into the labour market, but also help manage the effect of changing technological and business needs on established workers.

Yours sincerely



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1 - http://www.educationcounts.govt.nz/statistics/tertiary-education/life_after_study