

Industry Training stocks and flows

*...and the effects of the economic
downturn*

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INDUSTRY TRAINING STOCKS AND FLOWS ...AND THE EFFECTS OF THE ECONOMIC DOWNTURN

KEY FINDINGS

- There were large increases in government funding for industry training between 2003 and 2007 but the number of new learners has not increased to the same extent. Much of the increased funding went into retaining existing trainees.
- Industry training and Modern Apprenticeship new starts dropped away in 2009. This followed a period of stability in levels of new entrants to industry training, and growth in levels of new entrants to Modern Apprenticeships.
- In 2009, withdrawals from both programmes increased, against the trend of previous years.
- As a percentage of total participants, withdrawals were greater for industry training than for Modern Apprenticeships. New starts fell more sharply for Modern Apprenticeships than for industry training.
- These findings coincide with a downturn across most industries in New Zealand during 2009. Trainee numbers in some industries, such as building and construction, forestry, furniture and fishing, were clearly adversely affected by this downturn.
- Not all ITOs were affected in the same way, with some seeing net growth against the overall trend. Real estate is the most obvious example. Other ITOs continued to sign up new learners. However, these new starts were more likely to be older, more experienced workers.
- Younger people were more affected than older people by the reduction of new starts, as were Māori and Pasifika people. This is probably a reflection of the demographic make-up of the industries most affected by the downturn.

Introduction

1.1 Background

This paper examines the new starts, terminations and other exits in industry training, looking at the relationship between industry training take-up and the business cycle. Because participants in industry training must have jobs to enter training, and because industry shares some of the cost of training, it is expected that flows of learners into, within, and out of industry training will match changes in the business cycle. Funding for training provided by the Government is allocated on the basis of duration of study and study load, so this information will help the Government to forecast demand for industry training throughout the business cycle more accurately.¹

This paper builds on previous statistical analyses published by the Ministry of Education on industry training and Modern Apprenticeships.²

¹ See appendix table 1 for government and industry funding in industry training.

² See Mahoney 2009 (a), 2009 (b) and 2010.

Industry training

Industry training is formalised learning that occurs in the workplace. It is intended to provide employees with training and learning that is linked to national qualifications through the New Zealand Qualifications Framework. It is funded partly by industry, and partly by Government through the industry training and Modern Apprenticeships funds.

Industry training is administered by industry training organisations (ITOs), who purchase training and set standards for assessment. ITOs create qualifications for industry, and arrange for training and assessment to occur in and out of the workplace. Each ITO covers a specific set of industry areas: some have wide industry coverage, while others cover a narrow range.

In the case of industry training, participants are mostly already employed when they enter training. Modern Apprentices, who are mostly 16 to 21 years old, are generally not employed before starting training, but enter employment when they take on their training. A proportion of the funds spent on Modern Apprenticeships is intended to pay for brokerage services for young people wishing to become apprentices. Modern Apprentices are also supported with additional peer mentoring and training support services, provided by Modern Apprenticeships Coordinators.

Flows in industry training

Flows of participants into and out of industry training may depend on a number of factors. Training varies in duration from trainee to trainee, and from workplace to workplace, because industry training is conducted at a pace suitable to the needs of the workplace. This complicates a flow analysis, as the flow of participants is not as clearly defined as it is in provider-based settings, where there are more rigid terms, study periods and durations.

1.2 This study

This study examines starts, terminations and other exits from industry training. The Government aims to increase the proportion of qualification completions in industry training to maximise return on its investment. Withdrawals represent an opportunity cost and a real cost to Government (as well as trainees and employers), and so it is important to understand what drives withdrawals. The higher the proportion of programme exits that are terminations and unexplained exits, the lower the proportion of exits due to programme completions. That is, completions go down as terminations increase.

The data used in this study is collected for administrative purposes by the Tertiary Education Commission (TEC). The industry training performance management system (PMS) records trainee numbers from 2001.³

The period 2003 to 2009 covered in this study encompasses a period of strong economic growth, the start of the downturn, and the economic crisis. While the effects of the downturn were obvious in New Zealand in 2009, the downturn evidently affected some industries earlier than this. As such, this study may be able to provide insight into the response of industry training to future changes in the business cycle.

³ A window of two years has been allowed to ensure that learners are commencing training for the first time, which is why this analysis starts from 2003.

Changes in industry conditions

2.1 Gross Domestic Product growth

It is important to look at changes in Gross Domestic Product⁴ (GDP) in different industries to see if there are any areas of congruence with industry training participation.⁵

Table 1 shows the percentage change in GDP by broad industry area between 2004 and 2009. Several industries contracted in 2009, against the trend of the preceding years, including some covered by industry training and Modern Apprenticeships. These include forestry, wood and paper products, metal product manufacturing, construction, wholesale trade, retail trade, accommodation and restaurants. Agriculture declined from 2008, as did property services. Several other industries have been in decline since 2006/2007: fishing and food, beverage and tobacco. Construction began to decline in 2007, grew moderately in 2008, and dropped sharply in 2009.

Fewer of the industries covered by industry training appeared to grow in 2009: electricity, gas and water supply, local government administration, health and community services and cultural and recreational services were the only ones that grew.

⁴ GDP growth measures the total economic activity across all industry sectors in the economy, measured in the total dollar contribution.

⁵ it is not currently possible to match ITO coverage with an industry classification such as ANZSIC due to lack of collection of information about programme coverage.

Table 1 – Annual GDP growth by broad industry group

Broad industry area	2004	2005	2006	2007	2008	2009
Agriculture	13.3	-2.5	5.9	2.0	-2.3	-0.3
Forestry and Logging	-4.4	-5.4	-1.3	4.7	1.9	-4.4
Fishing	-4.3	-5.4	6.2	-1.8	-5.0	-2.9
Mining	-14.4	-2.5	8.1	-5.1	42.6	-1.3
Food, Beverage and Tobacco Manufacturing	7.9	0.8	3.1	-8.5	-1.7	-0.9
Textile and Apparel Manufacturing	-7.1	1.4	-2.8	-0.7	-3.4	-9.5
Wood and Paper Products Manufacturing	-0.8	7.2	-1.0	0.2	3.4	-11.2
Printing, Publishing and Recorded Media	3.1	3.3	-2.2	-1.4	-1.2	-5.9
Petroleum, Chemical, Plastic and Rubber Product	-6.8	4.3	-1.5	-5.5	-4.7	-4.5
Non-metallic Mineral Product Manufacturing	8.5	9.2	-0.4	3.0	6.0	-7.0
Metal Product Manufacturing	7.3	-2.2	-1.5	-4.8	0.7	-11.0
Machinery and Equipment Manufacturing	4.4	5.0	2.3	-9.5	7.4	-4.9
Furniture and Other Manufacturing	3.5	1.0	-1.8	-2.2	-7.7	-13.2
Electricity, Gas and Water Supply	1.6	4.0	-3.4	6.6	-3.5	0.6
Construction	10.5	7.5	5.0	-2.6	3.4	-9.6
Wholesale Trade	1.9	6.9	2.6	0.1	4.3	-5.2
Retail Trade	6.6	6.7	4.5	3.2	4.0	-3.6
Accommodation, Restaurants and Bars	1.1	4.1	4.3	1.4	0.1	-3.3
Transport and Storage	2.6	7.4	2.4	-1.1	4.6	-1.4
Communication Services	5.3	5.1	5.7	4.3	7.1	2.5
Finance and Insurance	4.6	7.4	5.8	6.0	7.4	3.8
Property Services	3.2	3.1	3.4	1.9	-1.1	-2.4
Ownership of Owner-occupied Dwellings	1.8	2.2	2.1	1.8	1.5	1.4
Business Services	3.1	2.5	5.7	2.7	4.6	1.1
Real Estate and Business Services	3.1	2.8	4.7	2.4	2.2	-0.3
Central Government Administration and Defence	4.5	6.8	6.5	8.8	7.5	4.3
Local Government Administration	7.2	5.6	3.2	7.4	5.8	5.7
Education	1.8	0.0	-0.6	-1.2	-0.1	-0.2
Health and Community Services	5.3	3.6	4.7	2.4	4.7	4.8
Cultural and Recreational Services	4.1	-1.8	-2.1	-1.6	-1.6	6.4
Personal and Other Community Services	1.8	4.8	4.1	1.3	1.3	-2.5

Source: Statistics New Zealand

2.2 Employment by industry

Table 2 shows the number of people employed by broad industry area 2003 to 2009. Agriculture, forestry and fishing, manufacturing, transport, postal and warehousing contracted in 2009, against the trend of previous years. The number of construction workers declined from 2008.

There was growth or relative stability in a number of industries, including wholesale trade, mining, electricity, gas, water and waste services, financial and insurance services (not covered by industry training), and health care and social assistance.

Table 2 – Average number of people employed (thousands) by broad industry group and year

Broad industry area	2003	2004	2005	2006	2007	2008	2009
Agriculture, Forestry and Fishing	155	149	144	148	151	148	143
Mining	4	5	6	6	7	6	7
Manufacturing	277	287	279	273	272	271	250
Electricity, Gas, Water and Waste Services	14	15	14	14	14	17	15
Construction	144	157	166	189	189	183	181
Wholesale Trade	92	104	106	98	99	99	100
Retail Trade and Accommodation	318	311	319	329	347	348	337
Transport, Postal and Warehousing	93	98	99	96	96	100	93
Information Media and Telecommunications	36	37	37	39	39	40	41
Financial and Insurance Services	55	60	65	70	71	68	68
Rental, Hiring and Real Estate Services	31	33	36	38	38	39	39
Professional, Scientific, Technical, Administrative and Support	189	204	219	228	230	235	240
Public Administration and Safety	99	102	112	117	118	113	118
Education and Training	159	166	170	170	174	180	184
Health Care and Social Assistance	175	178	186	193	200	205	221
Arts, Recreation and Other Services	112	113	121	118	119	125	120

Source: Statistics New Zealand

2.3 Unemployment by age

The effects of changes in the labour market from 2008 to 2009 were more drastic for young people, with moderate changes for older people.

Table 3 shows the proportion of people unemployed from 2003 to 2009. The unemployment rate for those aged 24 years or less increased very sharply in 2009 compared to that of other age groups, with 15 to 19-year-olds' level of unemployment increasing by 7.3 percentage points. Older people were less significantly affected.

Table 3 – Average annual unemployment rate by age group and year

Age group	2003	2004	2005	2006	2007	2008	2009
15-19 Unemployment Rate	14.5	13.2	13.3	14.1	14.4	16.1	23.4
20-24 Unemployment Rate	7.4	7.1	6.9	6.7	6.4	7.6	11.5
25-29 Unemployment Rate	5.4	4.4	4.5	4.0	4.0	4.8	6.2
30-34 Unemployment Rate	4.7	3.7	2.8	3.2	2.7	3.2	5.2
35-39 Unemployment Rate	3.8	3.0	2.9	2.6	2.4	2.6	4.2
40-44 Unemployment Rate	3.3	2.5	2.3	2.4	2.4	2.7	3.8
45-49 Unemployment Rate	2.2	2.0	2.2	2.4	2.4	2.5	3.9
50-54 Unemployment Rate	2.7	2.5	2.3	1.9	1.6	2.0	3.4
60-64 Unemployment Rate	3.7	2.5	2.1	1.9	1.3	2.2	3.0
65+ Unemployment Rate	1.8	2.1	..	1.5	1.6
All Unemployment Rate	4.8	4.1	3.8	3.9	3.7	4.2	6.1

Source: Statistics New Zealand, Household Labour Force Survey

Note: .. means that the figure is not available

Industry training

3.1 Industry training new starts

Industry training new starts refers to people entering industry training for the first time.⁶ The year of commencement refers to the first year in which a trainee is active in any form of industry training. This measure enables us to make an assessment of the flow of new entrants into industry training, as it ignores transfers between programmes within industry training for existing learners.

There were fewer new entrants to industry training in 2008 and 2009 than in the period 2005-2007. The proportion of new starts to total industry training activity has declined from 34 percent in 2003 to 25 percent in 2009. Table 4 shows the number of new starts in each calendar year, the total throughput⁷ of people active in industry training, as well as the proportion of new starts.

In 2003 and 2004 there was some stability in the proportion of new starts to throughput. However, the proportion has dropped by an average of 2 percentage points per year since then. Overall throughput has increased during this period, at an average of over 7 percentage points per year, but throughput growth is declining.

⁶ This section deals with industry training participants, and excludes Modern Apprentices. Modern Apprentices are examined in later sections.

⁷ The term 'Throughput' used throughout this analysis refers to the total number of distinct learners active in any one calendar year. See appendix tables 2 and 3 for the throughput for each ITO involved in industry training and Modern Apprenticeships 2003 to 2009.

Table 4 – Industry training commencements, throughput and proportion of commencements to throughput by year

Year	Commencements	Change year on year commencements (%)	Throughput (number of distinct trainees active in year)	% change year on year throughput	Proportion of commencements to throughput (%)
2003	39,495		116,831		34
2004	43,221	9	126,314	8	34
2005	48,471	12	149,977	19	32
2006	46,623	-4	159,396	6	29
2007	49,103	5	166,070	4	30
2008	46,574	-5	175,179	5	27
2009	45,945	-1	181,298	3	25

Source: Tertiary Education Commission

Figure 1 shows the year on year percentage growth of the number of new starts in industry training, and compares this to the overall GDP growth in New Zealand. It includes a line of best fit for both variables (labelled ‘linear’).

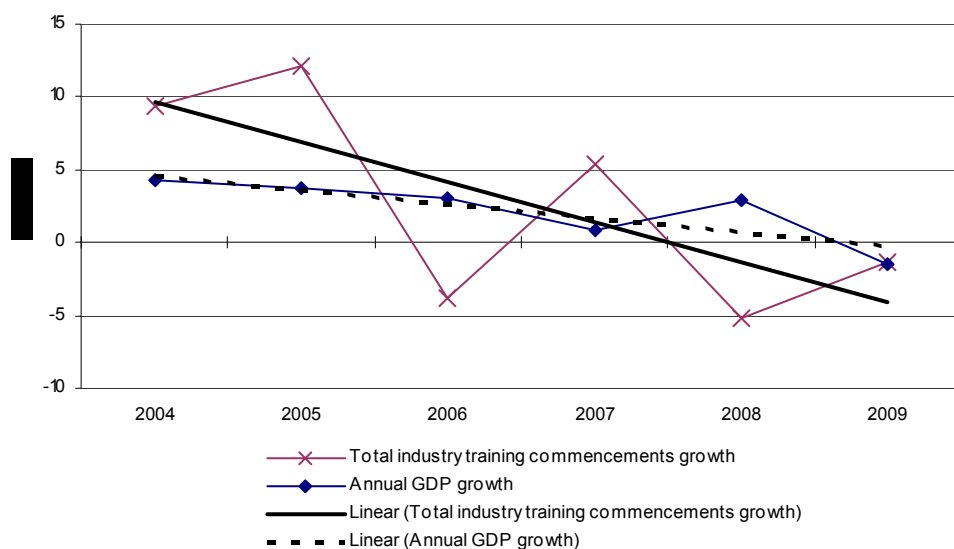
There was a general decline across the 2004 to 2009 period in the annual percentage growth of GDP. Overall, the number of new starts in industry training has reflected the change in GDP growth in each year since 2004. Both have dropped on average across the period, with the smoothed trend showing commencements dropped at a slightly faster rate than overall GDP growth.

Other contextual factors include the Government’s raising of the industry training funding cap each year between 2003 and 2007.⁸ Total government funding for industry training (including Modern Apprenticeships) increased from \$97.5m in 2003 to \$190.5m in 2007, or by 95 percent.

It seems that the additional funding has not led to a proportionate increase in the number of new trainees. There was a 24 percent total increase in new starts between 2003 and 2007, or an average of 5 percent per year in industry training. Starts in Modern Apprenticeships grew 37 percent in total, or an average of 7 percent per annum. Much of the additional funding has financed retaining existing trainees rather than funding new starts, largely because each new starter is expected to remain in the system for several years.

⁸ See appendix table 1.

Figure 1 – Industry training commencement growth compared to national GDP growth



Source: the Tertiary Education Commission and Statistics New Zealand.
 Note: GDP growth is annual growth, March quarter.

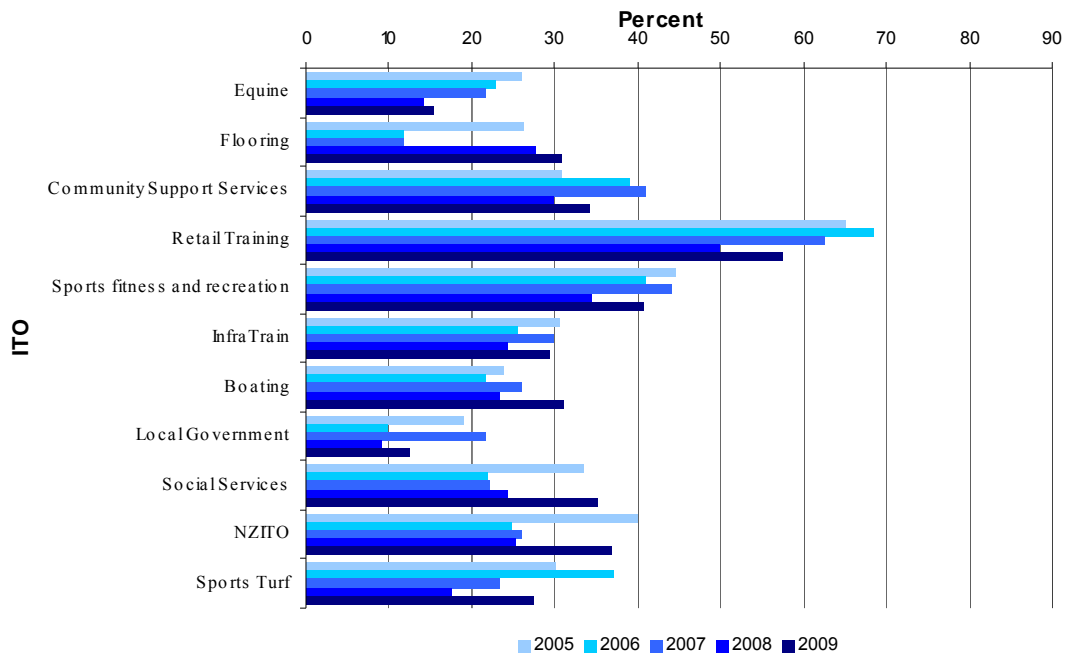
3.2 Industry training new starts by ITO

Figures 2 and 3 show the proportion of new starts in relation to the total throughput of trainees in each ITO by year. The data does not give a precise idea of the industry in which trainees are active,⁹ but the ITO gives a reasonable, if rough, indication of the industries where training is growing. Figures 2 and 3 show wide variation in new starts compared to throughput between industries during 2005 and 2009.

ITOs where commencements grew in 2009 include sports, fitness and recreation, boating, community support services, social services, flooring, NZITO (covering the dairy manufacturing and meat processing industries) and retail training.

⁹ ITOs may span several industries.

Figure 2 – Industry training new starts by ITO as proportion of total throughput 2005-2009 where new starts increased compared to throughput in 2009

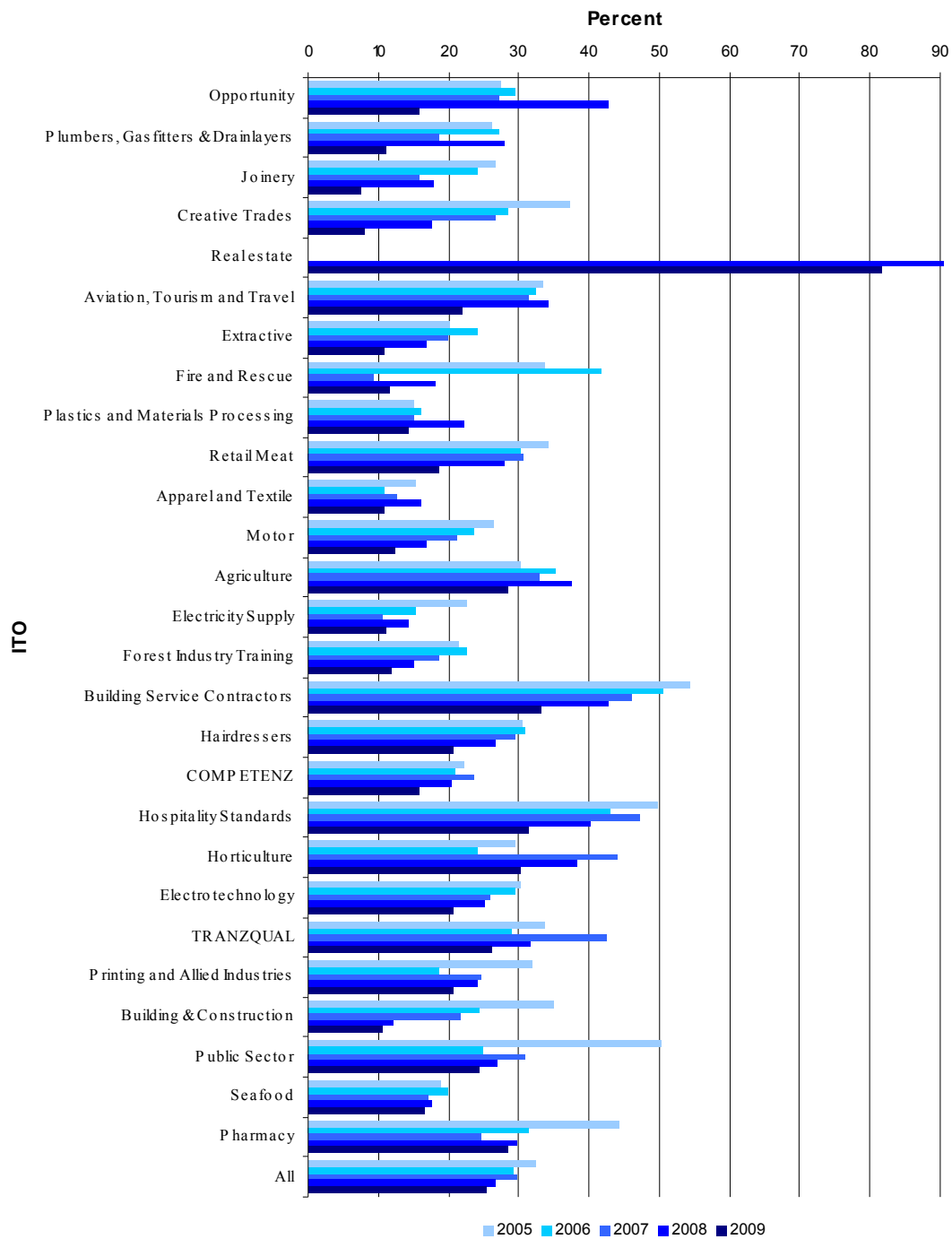


New starts in most industries declined between 2005 and 2009. Serious declines in new starts compared to throughput occurred in building and construction, building service contracting, creative trades, FITEC (forestry and furniture industries), joinery, motor, retail meat, plumbing gasfitting and drainlaying, extractive, opportunity (crane, scaffolding, rigging, industrial rope access and elevating work platform industries) and the hospitality ITOs.

These declines are most evident in 2009. However, for some ITOs, such as building and construction, building service contractors and creative trades, the decline in commencements began much earlier than 2009, possibly as a consequence of the early reductions in capital flows caused by financial market disruption.

Exceptions include the real estate industry, where new requirements for real estate agents to hold a qualification have led to a sharp increase in new participants.

Figure 3 – Industry training new starts by ITO as proportion of total throughput 2005-2009, where commencements decreased compared to throughput in 2009



3.3 Industry training terminations and unexplained exits by ITO

A withdrawal from training may occur for any reason. Withdrawals are recorded in the industry training administrative dataset as terminations, or can be subsequently coded as unexplained exits. The total number of withdrawals is counted each year, irrespective of whether the learner subsequently re-engages in industry training at a later date.

The most obvious reasons for withdrawal from training are:

- a trainee may change employers
- a trainee may leave employment and not continue working
- a business may cease to operate
- a trainee may die, or retire from work
- the employer may cancel training for employees (but retain the employee)
- a trainee may simply abandon training.¹⁰

A Statistics New Zealand/Department of Labour study (Crichton, 2009) found that jobs ending (with no immediate re-employment) accounted for around 17 percent of terminations in industry training, and changing jobs accounted for a further 10 percent of terminations.¹¹ This leaves roughly 73 percent of terminations that could be allocated to the third, fourth, fifth and sixth scenarios. Two of those scenarios -- the employer cancelling training for employee and the business ceasing to operate -- are more likely to occur during a period of economic downturn than during a period of sustained economic growth.

Employers may also respond to business cycle troughs by suspending training for their employees while times are tough, but retaining the employees. This scenario would almost certainly show up in the dataset as an unexplained withdrawal. If training resumes at a future date, then the enrolment will automatically reactivate.

Table 5 shows the proportion of terminations and unexplained exits (withdrawals) in relation to the total throughput of trainees in each ITO by year of exit. The proportion of withdrawals in relation to total industry training activity increased from 30 percent in 2007 to an estimated 39 percent in 2009.

Table 5 – Industry training terminations and unexplained withdrawals, and proportion of these to throughput by year

Year	Terminations and unexplained exits	Change year on year withdrawals (%)	Throughput (number of distinct trainees active)	Change year on year throughput (%)	Proportion of withdrawals to throughput (%)
2003	44,110		116,831		38
2004	40,964	-7	126,314	8	32
2005	43,901	7	149,977	19	29
2006	56,257	28	159,396	6	35
2007	49,453	-12	166,070	4	30
2008	58,730	19	175,179	5	34
2009 ¹²	70,919	21	181,298	3	39

Source: the Tertiary Education Commission

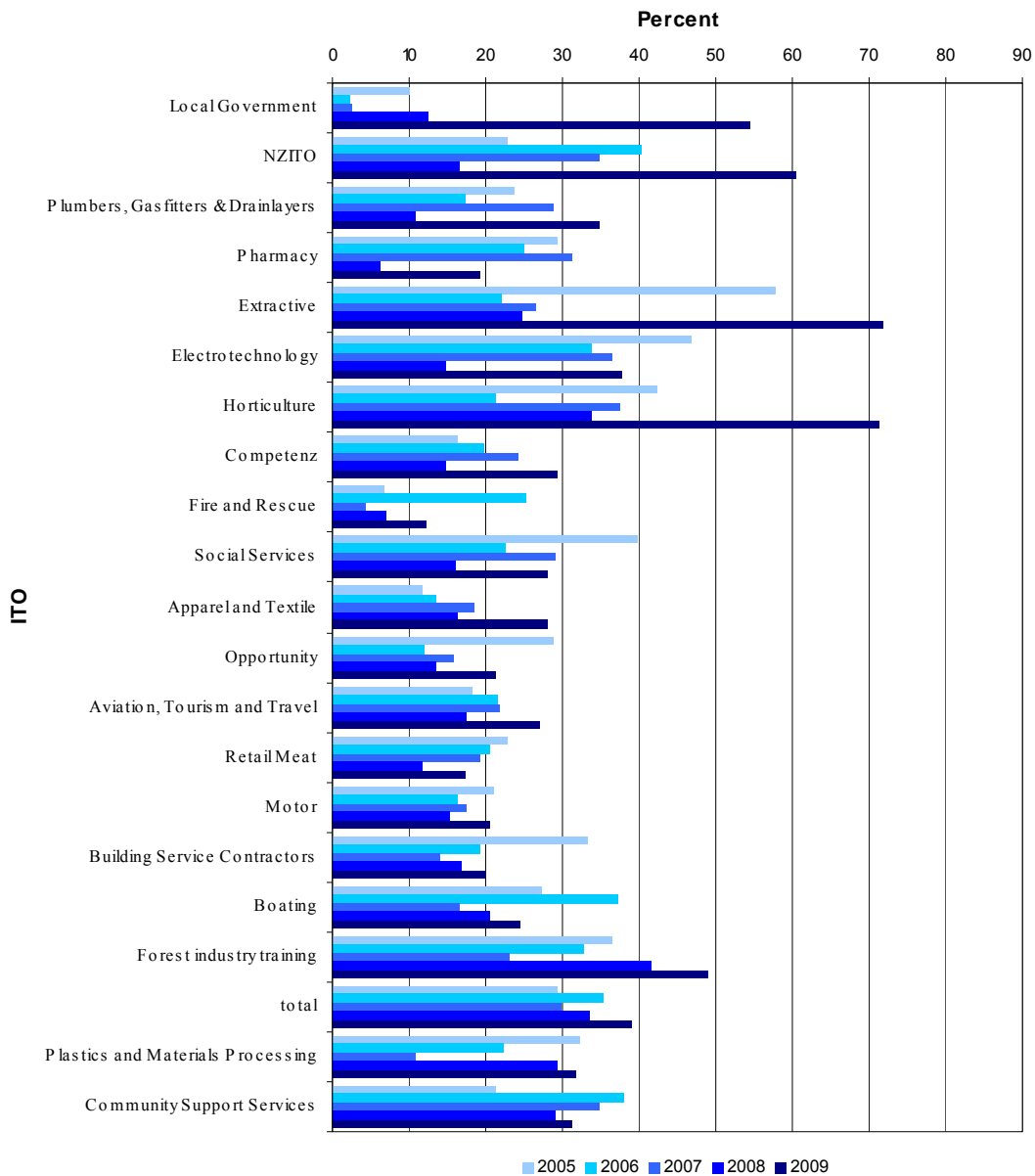
¹⁰ Another reason is that an ITO may substantially change a programme, in which case a new programme is created and trainees are withdrawn from the old one. The number of trainees affected by the transfer scenario is relatively small; Mahoney (2009a) found that the majority of learners in industry training participate in just one programme during their time in training.

¹¹ Pg. 47.

¹² Unexplained withdrawals allocated to the fourth quarter in 2009 have been estimated based on the relationship between total terminations in each year and unexplained withdrawals occurring in the fourth quarter of each year.

Figures 4 and 5 show the proportion of withdrawals in relation to the total throughput of trainees in each ITO by year. As with new starts, many ITOs seem to have had large changes in the number of withdrawals compared to total throughput in 2009. ITOs with large increases in the number of withdrawals relative to previous years include: apparel and textile, FITEC (forestry and furniture), NZITO, plumbers gasfitters and drainlayers, extractive, horticulture and local government.

Figure 4 – Industry training withdrawals by ITO as proportion of total throughput 2005-2009, where withdrawals increased compared to throughput in 2009

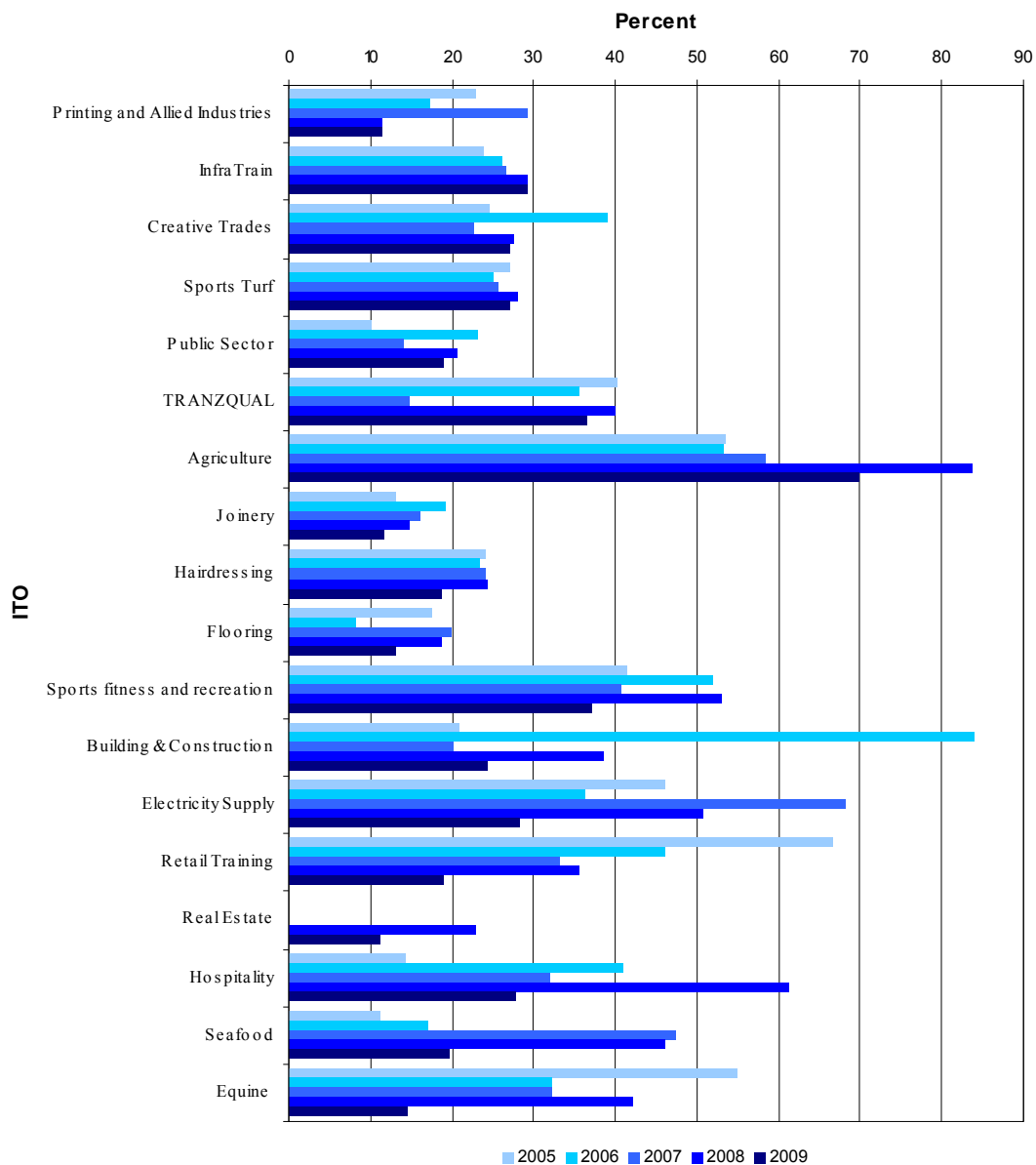


Withdrawals decreased in a number of ITOs during 2009. Withdrawals peaked earlier than 2009 for the agriculture ITO and the building and construction ITO, which both had very large numbers of exits in proportion to throughput in 2008 and 2006 respectively. 2007 seemed to be a transition year for the electricity supply ITO, with withdrawals representing almost 70 percent of throughput.

The retail training ITO saw large numbers of withdrawals compared to throughput in 2005, and steady decreases in withdrawals since then.

ITOs with genuine decreases in withdrawals in 2009 – that is, with relatively stable levels of withdrawals in relation to throughput in prior years – are relatively few, and include the hairdressing and flooring ITOs.

Figure 5 – Industry training withdrawals by ITO as proportion of total throughput 2005-2009, where withdrawals decreased compared to throughput in 2009



3.4 Industry training demographic change

Table 6 shows the percentage change from year to year of new starts by ethnic group, age of learner at start and wide regional area.

In 2009, new starts for younger learners declined, while new starts for older people increased by similar proportions. New starts by European apprentices declined more slowly than those by Māori or Pasifika people. New starts grew in some regions, such as Auckland and Waikato, but declined heavily in South Taranaki, Southern and Northland districts.

Table 6 – Percentage change in industry training commencements by ethnic group, age and region by year

Variable	2004	2005	2006	2007	2008	2009
European / Pakeha	8	7	-7	1	-7	-1
Maori	11	19	-6	6	-12	-11
Pasifika	20	28	11	9	1	-2
Other	24	29	25	15	5	2
Not stated	-4	8	-27	27	-4	11
15 to 19 years	18	18	-3	2	-12	-25
20 to 29 years	10	15	-5	3	-5	-11
30 to 39 years	4	8	-7	0	-6	1
40 to 49 years	6	11	-5	7	-4	12
50 or more years	11	5	6	27	5	29
Auckland	14	9	10	11	-10	8
Bay of Plenty	-5	5	-1	1	-13	-1
Canterbury	24	4	-7	6	-4	-10
Central	21	26	-9	6	2	-9
Eastern Coast	13	9	-17	13	-14	0
Nelson / Marlborough /	-2	7	-3	1	-6	-3
Northland	0	22	-11	9	-9	-14
South Taranaki District	-11	-1	-16	-24	36	-32
Southern	23	30	-11	7	7	-23
Waikato	0	21	-5	-4	5	7
Wellington	-12	7	-2	1	4	-9
Unknown	16	-36	-28	-15	43	-56

Source: the Tertiary Education Commission

Given the change in the unemployment rate for people aged 24 or younger in 2009, we might be able to infer that the reduction of new starts in 2009 for young people is a consequence of a change in labour market dynamics.

Overall changes in industry training demographics could be a consequence of the stratification of people in industry training and in each industry, rather than a reflection of recruitment preferences of employers during a recession.

For example, some industries, such as retailing, employ high numbers of young people compared to older people,¹³ and participation in training managed through the retailing ITO may or may not reflect this. Similarly, some ethnic groups are more likely to participate in some ITOs than others, and likewise for geographic differences. From 2004-2008, the proportion of trainees aged 30 or below participating in training with the retail ITO was 55 percent on average. By 2009, this figure had dropped to 42 percent. Retailing GDP dropped by over 3 percent in 2009. We might therefore assign some part of the drop in the number of young people participating in industry training to the decline in retailing.

In 2008, over 55 percent of all participants in industry training were under 30, but this number dropped to 41 percent in 2009. Traditionally, trainees in hairdressing, equine, retail meat, hospitality, motor, joinery, boating, creative trades, flooring, building and construction, plumbing gasfitting and drainlaying and agriculture are younger than those with other ITOs. Table 7 shows the proportion of all industry trainees active with these ITOs each year who are aged under 30.

ITOs with steep drops in trainees under 30 include equine, boating and flooring. Yet new starts in equine, boating and flooring all increased in 2009, while withdrawals in equine and flooring dropped (see figures 2 and 5 above). Therefore, we can assume that the new recruits in these ITOs were generally older, and were perhaps existing workers.

Table 7 – Industry training proportion of throughput under 30 years old by ITO and year

ITO	2005	2006	2007	2008	2009
Hairdressers	94	96	94	94	92
Retail Meat	89	94	84	83	82
Hospitality Standards Institute	94	63	74	78	75
Motor	90	93	87	87	86
Joinery ITO	87	90	87	87	84
Creative Trades	91	86	90	90	89
Equine ITO	90	90	92	91	54
Boating Industries Training	84	76	79	78	68
Building and construction	71	65	72	73	72
Agriculture	58	71	57	57	54
Plumbers, gasfitters, drainlayers	68	57	71	68	68
Horticulture	53	47	49	48	49
Flooring	58	70	59	54	42

Source: the Tertiary Education Commission

¹³ See Department of Labour 2009, pg.31.

Modern Apprenticeships

4.1 Modern Apprenticeships new starts

New entrants to Modern Apprenticeships dropped in 2009, following a period of sustained growth. Table 8 shows the number of Modern Apprenticeship new starts compared to total throughput in each year. The proportion of new starts compared to throughput dropped to 24 percent in 2009, after averaging 33 percent between 2004 and 2008. Overall, the raw number of new starts dropped by 27 percent, after an average increase of 12 percent between 2004 and 2008.

Table 8 – Modern Apprenticeship new starts, throughput and proportion of new starts to throughput by year

Year	Commencements	Change year on year commencements (%)	Throughput (number of distinct trainees active in year)	% change year on year throughput	Proportion of commencements to throughput (%)
2003	3,183	-4	7,376	48	43
2004	3,047	-4	9,261	26	33
2005	3,612	19	10,713	16	34
2006	4,073	13	12,504	17	33
2007	4,555	12	13,902	11	33
2008	5,520	21	16,379	18	34
2009	4,040	-27	16,749	2	24

Source: the Tertiary Education Commission

Figure 6 shows new starts as a proportion of throughput by administering ITO and year. As with industry training, there appears to be some variation of new starts between ITOs, but the variation does not seem so widespread.

ITOs with large drops in new starts compared to throughput in 2009 include: boating, building and construction, creative trades, electricity supply, electrotechnology, InfraTrain, joinery, hairdressing, flooring, sports turf, public sector, seafood and Tranzqual – most of them, in fact. Agriculture, horticulture, forestry and retail are the only ITOs where new starts grew in 2009.

Figure 6 – Modern Apprenticeships new starts by ITO as proportion of total throughput 2005-2009

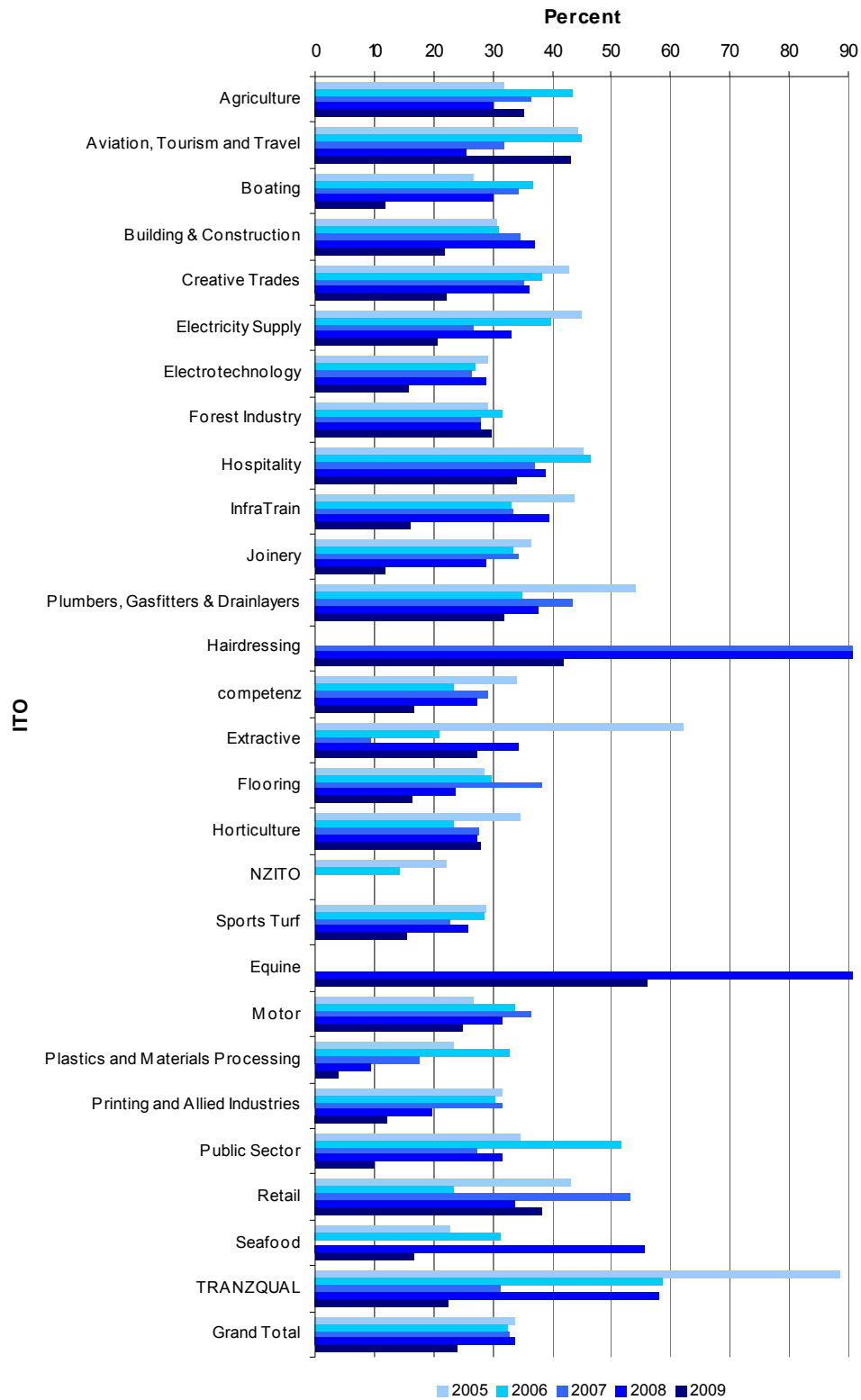


Table 9 shows the percentage change from year to year of new starts by ethnic group, age of learner at start and region. New starts by younger learners declined much faster than for older learners in 2009. New starts by European apprentices declined more slowly than those by Māori or Pasifika people.

No region saw an increase in new starts in 2009. The Northland and South Taranaki regions saw the largest percentage declines in new starts, while Eastern Coast and Nelson/Marlborough/West Coast regions were less affected.

Table 9 – Percentage change in Modern Apprenticeships new starts by ethnic group, age and region by year

Variable	2003	2004	2005	2006	2007	2008	2009
European / Pakeha	-3	-9	6	11	14	21	-25
Māori	-6	0	19	19	6	18	-35
Pasifika	-15	55	46	25	6	37	-42
Other	-25	20	36	38	2	41	-28
Not stated	50	210	63	-22	13	3	12
15 years or younger	-25	37	-2	-6	7	0	-41
16 years	-3	-3	9	15	7	14	-44
17 years	0	-8	17	7	13	21	-40
18 years	-3	-2	22	19	5	16	-26
19 years	-3	0	13	14	18	14	-27
20 years	7	-14	26	17	11	31	-28
21 or more years	-25	-4	66	13	35	52	-8
Auckland	17.8	-4.5	35.4	2.26	25.5	6.39	-32
Bay of Plenty	9.57	-1.3	6.56	25.8	-9.3	-5.1	-22
Canterbury	18.5	-19	32.1	8.56	-12	67.4	-34
Central	-18	8.74	14.1	55.1	-5.4	47.1	-27
Eastern Coast	-2.8	18.3	-11	-5.5	49.3	11.3	-10
Nelson / Marlborough /	25	-4	3.65	-7	48.6	13.8	-11
Northland	-12	4.21	8.59	5.58	-14	23	-39
South Taranaki District	25	3.33	-16	61.5	-24	46.9	-36
Southern	16.1	1.04	9.97	9.69	17.7	28.8	-33
Waikato	-7.5	-10	29.9	26.8	4.98	30.3	-18
Wellington	6.18	-20	89.4	-9.4	4.25	52.2	-32
Unknown	-60	-11	-28	76.6	34.9	-2.4	-20

Source: the Tertiary Education Commission

4.2 Modern Apprenticeship terminations and unexplained exits by ITO

Withdrawals increased in 2009, a situation which seemed to have started in 2008. Table 10 shows the proportion of terminations and unexplained exits (withdrawals) to the total throughput of trainees in each ITO by year of exit. The proportion of withdrawals to total Modern Apprenticeship activity increased from 12 percent in 2003 to an estimated 17 percent in 2009.

Table 10 – Modern Apprenticeship terminations and unexplained withdrawals, and proportion of these to throughput by year

Year	Terminations and unexplained exits	Change year on year withdrawals (%)	Throughput (number of distinct trainees active in year)	Change year on year throughput (%)	Proportion of withdrawals to throughput (%)
2003	879		7,376	48	12
2004	1,196	36	9,261	26	13
2005	1,305	9	10,713	16	12
2006	1,536	18	12,504	17	12
2007	1,614	5	13,902	11	12
2008	2,250	39	16,379	18	14
2009 *	2,863	27	16,749	2	17

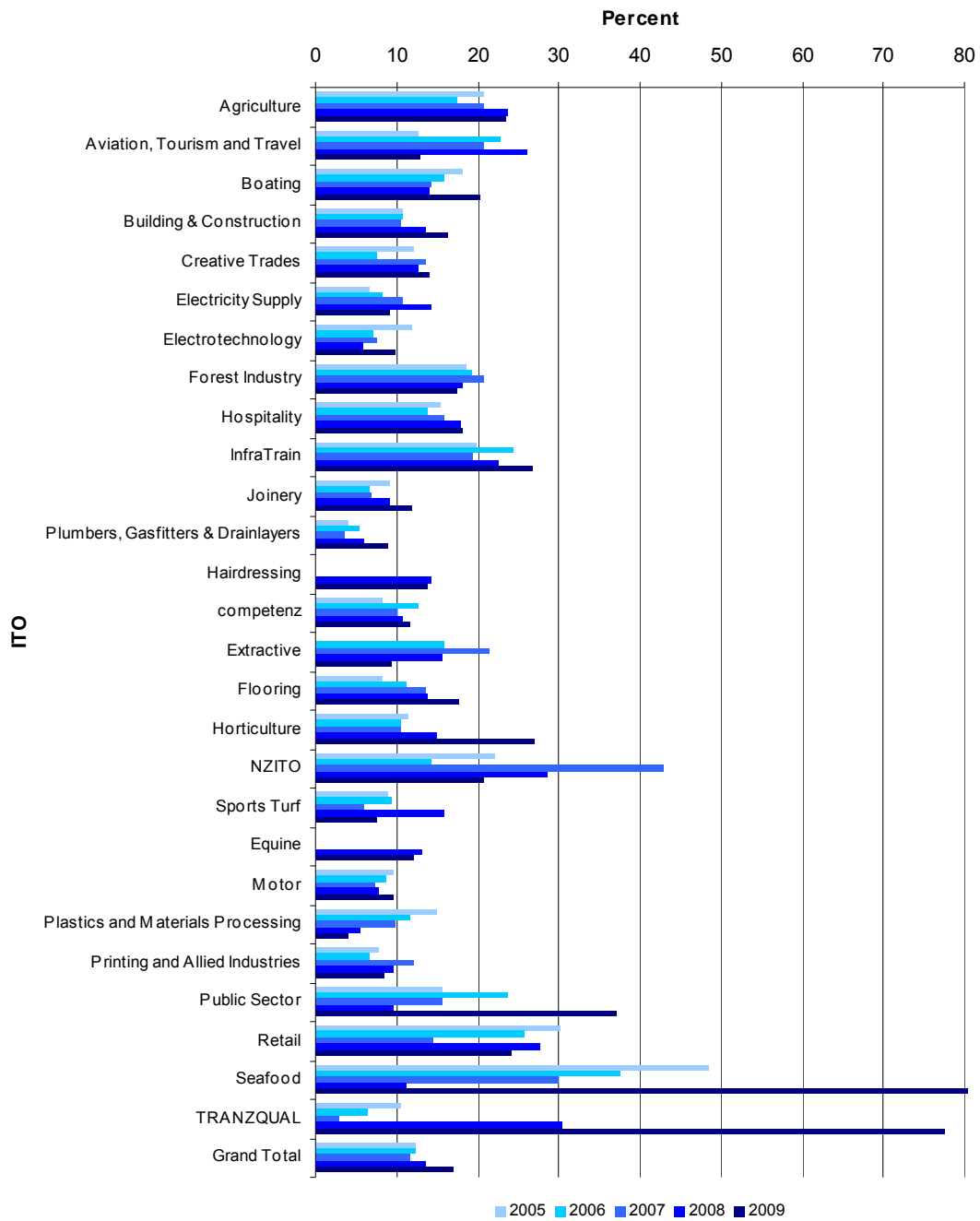
Source: the Tertiary Education Commission

* note – unexplained withdrawals allocated to the fourth quarter in 2009 have been estimated based on the relationship between total terminations in each year and unexplained withdrawals occurring in the fourth quarter of each year.

Figure 7 shows the proportion of withdrawals from Modern Apprenticeships in relation to the total throughput of trainees in each ITO by year. Overall, there has been a small but noticeable increase in the number of withdrawals compared to previous years – but much smaller than the increase in withdrawals from industry training in 2009.

Some industries, such as seafood and Tranzqual (road transport, passenger services, warehousing and logistics, ports and stevedoring) had large numbers of withdrawals compared to total throughput in 2009. Aviation tourism and travel ITO withdrawals declined in 2009, as did NZITO's (covering dairy manufacturing, meat processing and the leather industry), where withdrawals peaked in 2008.

Figure 7 – Modern Apprenticeship withdrawal by ITO as proportion of total throughput 2005-2009



Conclusions

Increases in government funding between 2003 and 2007 may have maintained the number of existing industry training learners in recent years – but the number of new learners has not increased substantially from year to year.

Flows of participants into and out of industry training and Modern Apprenticeships appear to have been affected by the economic crisis. This was seen mostly in 2009, though some industries appear to have felt the effects of the financial markets crisis some time earlier than this. Some industry sectors, such as manufacturing, have been in decline for a number of years.

Where broad industry areas can be matched to ITO coverage, there is some congruence between the broad industries whose GDP growth declined and declines in those industries' industry training. Agriculture, textile and apparel manufacturing (apparel and textile ITO) forestry and furniture (covered by FITEC), construction (building and construction ITO) and mining all declined in GDP growth around the same time as declines in new starts and increases in withdrawals occurred. However, there is a degree of ambiguity around the coverage of specific industries.

Employers may have reacted to the economic downturn by taking on fewer new staff, shedding staff and/or curtailing new investment in workplace training, resulting in fewer new starts. Training for existing employees may have been temporarily suspended until enterprise profit margins improved. All of these scenarios may have contributed to the increase in withdrawals in 2009 and, overall, fewer new starts compared to previous years.

Some industries saw big drops in the number of new starts in 2009, both in absolute terms and relative to the total throughput of trainees. This effect was mitigated somewhat by the large increase in new real estate trainees, brought about by new real estate entry qualification regulations, and net growth in NZITO and the flooring, equine and hospitality ITOs.

Some ITOs (NZITO, flooring, equine and hospitality ITOs) maintained their level of new starts. They continued to sign up new entrants, but the new entrants were more likely to be older, and perhaps already established workers rather than young, less experienced or non-European workers. New starts for younger people saw the sharpest decline in both industry training and Modern Apprenticeships, while new starts for older people in industry training actually increased in 2009. Māori and Pasifika new starts declined faster than those of other ethnic groups.

Modern Apprenticeships had fewer withdrawals proportional to throughput than seen in industry training, but the relative reduction of new starts in 2009 was greater than in industry training. Existing Modern Apprentices may have been better protected during the economic downturn than industry trainees, possibly because of the more formalised structure of training, the wider transparency, and the greater observance of and adherence to training agreements than is seen in non-targeted industry training.

Appendix

Appendix Table 1 – Industry training funding by source by year

Year	Government funding (\$000s)	Industry cash contribution (\$000s)	Total funding (\$000s)	Government funding (% of total)	Industry funding (% of total)
2003	97,549	41,205	138,755	70	30
2004	124,823	46,419	171,243	73	27
2005	136,718	55,271	191,989	71	29
2006	166,784	61,061	227,846	73	27
2007	190,579	66,258	256,838	74	26
2008	198,099	70,603	268,702	74	26
2009	203,466	87,487	290,953	70	30

Source: Tertiary Education Commission

Notes:

1. funds are GST inclusive
2. funding is for industry training and Modern Apprenticeships

Appendix Table 2 – Industry training throughput by ITO and year

ITO	2003	2004	2005	2006	2007	2008	2009
Agriculture	8,380	8,881	8,750	9,673	10,164	11,602	11,365
Apparel and Textile	1,237	1,241	1,355	1,389	1,474	1,540	1,528
Aviation, Tourism and Travel	2,771	2,753	3,576	3,806	4,042	4,292	3,856
Boating Industries	319	303	265	234	273	330	417
Building & Construction	5,936	6,617	8,186	8,680	9,145	8,264	6,508
Building Service Contractors	531	649	685	965	1,368	1,584	1,386
Community Support Services	5,290	6,724	8,380	9,256	10,707	11,582	12,662
Creative Trades	536	656	700	859	918	860	741
Electricity Supply	4,163	3,257	3,994	3,901	3,120	1,873	2,036
Electrotechnology	6,459	8,455	8,735	9,834	10,643	11,573	12,653
Fire and Rescue	1,545	1,180	1,534	2,929	2,585	2,402	2,394
Forest Industry (FITEC)	17,218	16,544	17,060	14,554	15,007	15,646	13,460
Hospitality	5,465	7,333	12,665	14,978	15,781	16,419	15,297
InfraTrain	2,019	2,020	2,329	2,802	3,409	3,622	4,378
Joinery	562	672	823	862	783	675	543
NZITO	8,702	11,236	16,562	15,964	13,997	16,712	26,684
Plumbers, Gasfitters & Drainlayers	1,334	1,468	1,698	1,831	1,898	2,125	2,030
Hairdressing	1,972	1,877	1,894	1,971	1,979	1,871	1,422
COMPETENZ	11,189	12,381	14,280	15,376	16,295	16,643	16,088
Extractive industries	3,757	3,337	3,933	4,695	5,428	6,050	5,758
Flooring	182	275	350	338	363	411	541
Horticulture	1,152	1,328	1,393	1,277	2,040	2,638	2,602

ITO	2003	2004	2005	2006	2007	2008	2009
Sports Turf	409	414	384	357	358	345	417
Equine	241	252	331	332	291	259	417
Local Government	412	434	508	512	592	601	618
Motor	3,667	4,002	4,049	4,453	4,633	4,516	4,370
Retail Meat	595	647	543	569	554	555	580
Opportunity	601	763	1,004	1,059	1,252	1,646	1,510
Pharmacy	134	154	140	124	118	111	120
Plastics and Materials Processing	878	886	882	761	897	859	1,131
Printing and Allied Industries	434	496	535	541	514	539	589
Public Sector	1,770	1,993	3,653	4,117	4,036	4,085	3,999
Retail Training	2,719	2,777	2,702	2,676	2,931	3,030	4,318
Sports Fitness and Recreation	4,071	3,873	4,391	4,445	4,661	3,969	4,152
Social Services	1085	877	873	750	892	795	1037
Seafood	2,047	2,621	2,949	3,908	4,270	3,807	4,226
Real estate						126	1,073
TRANZQUAL	7,049	6,938	7,886	8,618	8,652	11,222	8,392
Total	116,831	126,314	149,977	159,396	166,070	175,179	181,298

Appendix Table 3 – Modern Apprenticeships throughput by ITO and year

ITO	2003	2004	2005	2006	2007	2008	2009
Agriculture	351	530	630	651	832	967	1,019
Aviation, Tourism and Travel	30	94	122	173	229	251	240
Boating	248	315	375	399	425	415	450
Building & Construction	627	1,022	1,305	1,487	1,722	2,020	2,591
Creative Trades	55	97	137	173	212	236	260
Electricity Supply	190	233	276	369	484	545	584
Electrotechnology	416	566	725	819	862	930	1,013
FITEC	614	724	757	712	692	690	672
Hospitality	73	193	263	374	481	532	602
InfraTrain	60	140	187	251	268	266	320
Joinery	90	143	203	230	279	306	349
Plumbers, Gasfitters & Drainlayers		21	76	146	220	346	523
Hairdressers						42	356
COMPETENZ	905	1,315	1,617	1,935	2,203	2,208	2,389
Extractive Industries			10	29	38	42	32
Flooring	112	177	264	252	294	328	316
Horticulture	239	404	506	617	735	872	1,039
NZITO	3	5	7	9	7	7	7
Sports Turf	43	73	91	111	129	118	139
Equine							38
Motor	658	973	1,141	1,266	1,506	1,808	2,167
Plastics and Materials Processing	17	33	51	47	52	51	53
Printing and Allied Industries	117	143	170	192	194	216	196
Public Sector	85	70	162	185	258	212	238
Retail Training	18	56	107	146	132	180	216
Seafood	12	16	28	35	16	10	9
TRANZQUAL	20	33	51	105	234	304	561
Grand Total	4,983	7,376	9,261	10,713	12,504	13,902	16,379

References

Crichton, S. (2009). *Does workplace-based industry training improve earnings?* Statistics New Zealand: Wellington.

Department of Labour (2009). *Youth in the New Zealand labour market*. DOL: Wellington.

Mahoney, P. (2009a). *Industry training– exploring the data*. Ministry of Education: Wellington.

Mahoney, P. (2009b). *Modern Apprenticeships – completion analysis*. Ministry of Education: Wellington.

Mahoney, P. (2010). *Comparing Modern Apprenticeships and industry training*. Ministry of Education: Wellington