

“Engineering and Technology Labour Market Study – Final Report” dated April 30, 2009

- Comments.

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General

The comments here are based on the author’s personal knowledge and in-depth analysis of certain rare but important reports and documents concerning unemployment, under-employment and the performance of the Canadian economy, dysfunctional government rules and regulations restricting access to any retraining for people out of work - which are routinely ignored - and widespread disinformation about people out of work,.

The point is to highlight certain ongoing problem areas, in addition to the ones noted in the Final Report, which must be dealt with.

Quote 1, from Page 3:-

“A Labour Market Tracking System was developed to support ongoing monitoring of labour market conditions by region and by technical field.”

Quote 2, also from Page 3:-

“Demographic trends will reduce the cohort from which the overwhelming majority of new admissions into post-secondary engineering and technology programs are recruited. These trends increase the urgency of addressing the acute gender imbalance in admissions to engineering and technology programs.

Immigration is re-shaping the profile of the engineering and technology labour force. A surge in immigration after 1993 led to serious imbalances between supply and demand in some regions, notably Ontario. In the 1990s, governments and the professions failed to anticipate the serious labour market integration challenges that international graduates in engineering and technology would face.”

Quote 3, from Page 4:-

“By 2008 certain imbalances in the engineering and technology labour market had become more evident. There were significant skills shortages in some regions and in a number of technical fields. These shortages were exacerbated by an apparent worsening of the gap between the skills that employers required and the skill profile of new entrants into the engineering and technology labour market. In some regions skills shortages co-existed with a more than adequate supply of formally qualified job-seekers.

Globalization also intensified during the period. Among the consequences of globalization is a restructuring of earnings. Globalization increases the premium on those engineering and technology skills that are in short supply internationally while, at the same time, generating downward pressure on standard or ‘commodity’ engineering and technology skills.

The recommendations arising from the analysis of these trends are grouped around four themes:

Re-thinking Professional Formation

Ensuring Supply by addressing the Gender Imbalance

[Quote 4, from Page 5:-](#)

“Introduction

The *Engineering and Technology Labour Market Study* was a joint undertaking of Engineers Canada and the Canadian Council of Technicians and Technologists (CCTT). **The study was supported financially by Human Resources and Skills Development Canada (HRSDC).**

The *Engineering and Technology Labour Market Study* arose from a key finding in an earlier study - *From Consideration to Integration* - which examined the challenges faced by international engineering graduates as they endeavour to integrate into the Canadian engineering and technology labour market.¹ **Among the conclusions of that study was the need for significantly more detailed labour market information and a better understanding of the engineering and technology labour market.** Other labour market issues, including the impact of globalization trends on the Canadian engineering and technology labour market, were identified in workshop hosted by HRSDC. **The workshop brought together representatives from Engineers Canada, the Canadian Council of Technicians and Technologists, the post-secondary system, governments, and industry.”**

Questions:-

1. **Where were the consultations with the job seekers themselves in all this? They weren't any.**
2. **Why was there no mention concerning the implications of the following:-**
 - 2.1. **Hidden unemployment and the “Ottawa's Hidden Workforce” report of Fall 1998?**
 - 2.2. **The Stats Can “Life after High Tech” report of July 20, 2007?**
 - 2.3. **The Stats Can “Work Hours Instability in Canada” report of March 2006?**

[Quote 5, from Page 8:-](#)

“ Census data suggest that *30% of the persons in engineering occupations in 2006 did not have a university degree in engineering.* About a third of these were persons with college qualifications in technology. **Census data also show that a large number of persons with university degrees in engineering were working in occupations which, for the most part, did not fall under the ambit of statutory regulation.**

[Quote 6, also from Page 8:-](#)

“ Immigration is re-shaping the profile of the engineering and technology work force. ***The challenge of integrating internationally educated professionals into the Canadian labour market was seriously under-estimated.***”

[Quote 7, also from Page 8:-](#)

“ ***The engineering and technology professions in Canada appear to lag the majority of regulated professions in this country in adopting continuing professional development standards*** and also lag trends that are emerging for engineering and technology professionals in the United States, the United Kingdom and Japan.”

Question: And what about professional development for people “elbowed out” of their professions into unemployment by bad job market trends, combined with ill-informed criticism from everybody directed at people who happen to be out of work through no fault of their own?

[Quote 8, from Page 11:-](#)

“Skills Shortages:

The *2007 Survey of Engineering and Technology Employers* showed many employers were experiencing or anticipating a skills shortage. At the same time, the 2006 Census showed that there was significant under-employment among both domestic and international engineering graduates.³

All professions require well-developed institutions and traditions to bridge the gap between the core skills that are acquired through post-secondary training and the additional technical and non-technical skills that employers require. **The co-existence of a skills shortage with under-employment suggests that for engineering and technology occupations these institutions and traditions have weakened. Among the most unsettling trends is a decline in the number of ‘junior engineers’ or ‘junior technologists’ that provided opportunities for recent graduates and immigrant professionals to acquire practical experience and additional skills.** Small and mid-sized firms, in particular, appear to be cutting back on their hiring of entry-level engineers and technologists. Offshoring of basic engineering and technology tasks will exacerbate this situation.

In the absence regulatory or institutional pressures, the labour market gravitates towards a high-training or a low-training equilibrium. **In a high-training equilibrium, most employers hire entry-level job seekers and invest in training these staff. When a critical mass of employers change their policy, a perverse dynamic takes over. Employers who invest in training face a risk that their recently trained staff will be ‘poached’ by competitors. The poaching risk becomes a powerful disincentive to train. The labour market then slides further into a low-training equilibrium. Skill shortages grow worse, while at the same time, many graduates are forced into under-employment. The loss of entry-level positions also makes it more difficult for individuals to meet the experience requirements that professional associations establish for licensure or certification.”**

Quote 9, also from Page 11:-

³ Around 11% of persons with a Canadian engineering degree, and 18% of persons with a non-Canadian engineering degree, were employed in occupations for which they were over-qualified. Roughly 10% of persons employed as technologists or technicians were engineering graduates.

Question: And what about people who could not get any work at all? Two groups of people involved here: (1) the so-called “official” unemployed and (2) those who are falsely classified as “Not in the Labour Force” but are actually unemployed in practical terms. Group (2) actually includes roughly twice as many people as group (1); see the “Ottawa’s Hidden Workforce” report of Fall 1998. In addition to this, you have to consider the Stats Can “Work Hours Instability in Canada” report of March 2006 which estimated that only ONE THIRD of employed Canadians between 25 and 54 had “standard full-time work” of between 34 and 46 hours per week.

Quote 10, from Page 15:-

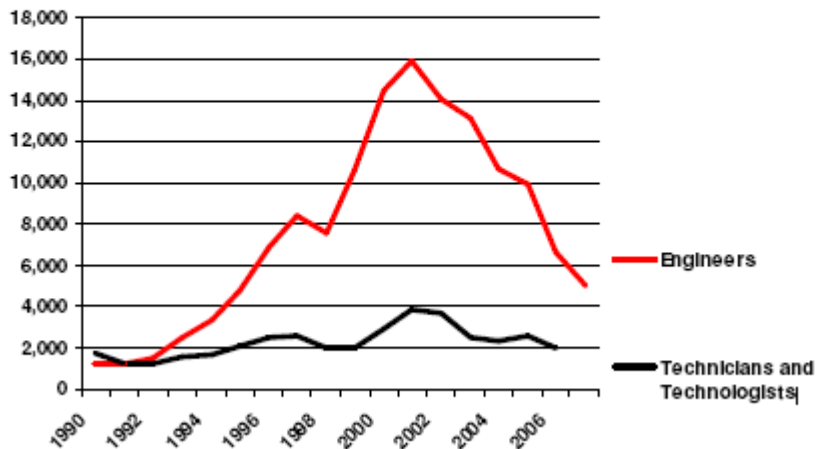
“Immigration:

Immigration is changing the face of the engineering and technology professions in Canada. **In the early 1990s, the framework for Canadian immigration policy was changed. In place of labour market absorption criteria, which were always difficult to apply, economic applicants were assessed on their postsecondary qualifications and related employment experience. This change in policy had significant implications for the engineering and technology professions, but especially the engineering profession.** Figure No. 8 shows that the immigration of persons whose intended occupation was an engineering or technology occupation rose sharply after the change in policy, peaking at 19,772 persons in 2001. Eighty percent of these immigrant professionals had an undergraduate degree in engineering. Roughly half had a graduate degree.

Question: why was there no effort to solicit any input from job seekers about the difficulties of finding work? Among other things, there is no indication of any knowledge of the numbers of people applying for every position posted, and no analysis of the implications of this for the time it takes someone to find a job, which equals the time that they are prevented from contributing to the tax base.

With respect to what Figure No. 8 shows :-

Figure No. 8
Immigration of Persons whose Intended Occupation
was Engineer or Technician/Technologist, 1990-2007
Citizenship and Immigration Canada
(Labour Market Tracking System Source Files—Canada)



Is anybody aware of how the trend from 2002 onwards might be the result of word getting out internationally, over the Internet and other means, concerning the behaviour of Canadian employers and others towards job seekers? What about incompetent Human Resources departments, for instance, and the total ignorance on their part of the implications of having large numbers of people (typically 500+) applying for every job posted?

Why is nobody considering the implications of this for the tax base – and for that matter, Canadian national security as well? Doesn't anybody realize the potential of this for giving rise to terrorist attacks in Canada, instigated by people who have been unfairly and /or incompetently treated?

And what about the opinions voiced about getting work in Canada on the web site www.notcanada.com ?

Quote 11, from page 16:-

“Numerous studies have documented the difficult transition that many internationally educated professionals experienced in the past decade. See, for example, the recent Statistics Canada study: Diane Galarneau and René Morissette, “Immigrants’ education and required job skills,” *Perspectives on Labour and Income*, vol. 21, no. 1 (Spring 2009), Statistics Canada, Cat. No. 75-001-XPE. The authors conclude, “During the 1991 to 2006 period, the proportion of immigrants with a university degree in jobs with low educational requirements (such as clerks, truck drivers, salespersons, cashiers, and taxi drivers) increased. For recent immigrants, the proportion varied between 22% and 28% for men and between 36% and 44% for women. For established male immigrants, the trend was quite pronounced, as their proportion rose from 12% to 21%, while their female counterparts posted a more modest advance, climbing from 24% to 29%. Those proportions contrasted sharply with the stable proportion for native-born Canadians, about 10% for both men and women. The increases [in under-employment] for established immigrants suggest that the difficulties, which have long plagued recent immigrants, are today affecting established immigrants, which also suggests that difficulties experienced by recent immigrants are not necessarily temporary.” p 15 [Emphasis added.]

Question: So why was nobody investigating the underlying causes of this? Did it not occur to anybody that it might have something to do with failure by everybody to pay attention to the numbers of jobs needed to employ everybody properly? If that's what was happening, then it can only have resulted

from inattention to the true level of under-performance of the economy as a whole relative to potential. You can only hope to optimize the performance of the economy as a whole if you have knowledge of :-

- (a) the numbers of “official” unemployed
- (b) the additional numbers of unemployed who are falsely classified as “Not in the Labour Force” – who, in fact, comprise roughly twice as many as (a)
- (c) the true size and character of the “under-employment” phenomenon

- and then act accordingly.

Quote 12, from Page 17:-

“The Ethic and Culture of Professionalism:

Survey data show broad support for the ethic and culture of professionalism among engineers and engineering technicians and technologists. Survey data also show that professionalism is strongly associated with licensure or certification.”

Question: why is there no ethic and culture of professionalism amongst Canadian politicians, government bureaucrats, the business community, the average corporate Human Resources person and the average Canadian voter, concerning people who are out of work? Why do they not have the necessary analytical and mathematical competence to deal with the situation properly?

Quote 13, on page 20, under ”Recommendations / Re-thinking Professional Formation/ Bridging the “Skills Gap”:-

“In the engineering and technology, the structuring of internships is quite different from many other professions. The professional associations prescribe experience requirements, but it is left to individuals to find employment which will provide them with this experience.”

Question: how are the said individuals supposed to find appropriate employment if there is no employment to be found – because nobody was paying attention to making the economy perform properly, such that engineering firms could create enough positions to employ everybody who applied to them? How can anybody expect the individual to cope when there might be 500+ people applying for every position that becomes open?

NOBODY HAS BEEN PAYING ATTENTION – PERIOD!!

WHY?

BECAUSE NOBODY WAS DOING ANY PROPER MATHEMATICAL ANALYSIS OF THE PROBLEM IN THE FIRST PLACE.

Quote 14 on Page 21 – same section:-

“....changed circumstances require a serious re-thinking of how experience-based skills should be incorporated into professional formation. There are various models that may have relevance. These include:

- increasing the role of co-op programs or undergraduate internships,**
incorporating unpaid *practicum* components into engineering and technology curriculum,
regulating through statute or through practice licenses a minimum number of internship positions in relation to total engineering and technology employment,
- accessing government support for internship positions,**
- promoting an increase in the number of internship positions.**

So there is no excuse for keeping in place the current dysfunctional E.I. – related rules and regulations which in practice disqualify most job seekers from accessing government support for co-op programs or internships in this context - based either on “lack of insurable weeks” of employment, “ineligibility” caused by their being forced to work as “independent contractors”, being denied access based on their E.I. benefits having expired based on some arbitrary time limit, or never being able to get any “insurable employment” in the first place. The whole system – federal and provincial - is a mess for this and other reasons. One example of this concerns the Ontario Targeted Wage Subsidy program.

Quote 15 on page 29:-

“Recommendation No. 8.

Engineers Canada and the Canadian Council of Technicians and Technologists should maintain and further develop the Labour Market Tracking System so that it can provide timely and relevant data on labour market conditions and identify underlying trends. Reports should be developed in close and continuing collaboration with provincial and territorial associations/ordres and, as appropriate, with employers, the post-secondary system, industry associations, and governments.”

The said Labour Market Tracking System should be extended to include input from people who are out of work or under-employed significantly – that is:-

1. “Official unemployed”
2. Those falsely categorized as “Not in the Labour Force” based on false and pejorative labeling to the effect that they “have dropped out of the labour force”, “given up looking for work”, or are “discouraged workers” - but who are actually unemployed. Based on the “Ottawa’s Hidden Workforce” of 1998 these people actually comprise about 38% of those “Not in the Labour Force” and an average of 80,500 people in Ottawa in 1997. On the other hand, the “official unemployed” accounted for 38,800 people out of an official “labour force” of 442,500 people for an “official unemployment” rate of 8.8%
3. People who are “under-employed”. Based on the Stats Can “Work Hours Instability in Canada” report of March 2006, TWO THIRDS of Canadians officially “employed” were in trouble with large fluctuations in working hours from one year to the next, and /or under-employment based on shortfall in working hours compared with what they were prepared to put in. To this you have to add the effects of shortfall in hourly rate caused by not being employed at the level of their qualifications and experience, foreign or otherwise.

Engineering and Technology Labour Market Study
Steering Committee

- Pages 31 and 32

With respect to the membership of the Steering Committee in general, and the following members in particular -

Robert Okabe
City of Winnipeg

Colette Rivet
BioTalent Canada

Kyle Ruttan
Canadian Federation of Engineering Students

Deborah Shaman

- It seems clear that there was some representation from people who were at least to some degree aware of the problems facing people out of work

Against this, however, it does not appear that any of the people referred to were aware of the true size and character of Canada's unemployment and under-employment problem, referred to earlier in this analysis. This would appear to have happened because certain rare but important documents and the implications of them, referred to earlier, were not brought to their attention. Further, there are long-standing problems with incorrect analyses based on incomplete information being presented to the media, for consumption by everybody, which in practice have amounted to gross under-statements of the size of the problem.

These incorrect analyses has been aggravated by repeated instances of misunderstanding - or, worse, disinformation – being disseminated, to the effect that some people have “given up looking for work”, “dropped out of the labour force” or are “discouraged workers”. Such labels have obvious negative connotations concerning the people referred to. Further, these reports never define what the terms just referred to are supposed to mean in practice and have never quoted the results of any proper surveys to justify applying these terms to the people affected.

In other words, these DESIGNATIONS ARE NOT VALID DESCRIPTIONS of the people referred to!!

Yet nobody ever thinks to question the meaning and application of these terms.

That can mean only one thing: the average person with no time and no interest in what is going on thinks that people out of work are in that position “because it is their own fault”, or “because they have the wrong attitude”, or some such. This gives rise to the popular but false notion that they need not be listened to. Then, when they meet someone who has had problems, they just indulge in ill-founded criticism. One of many types of popular expression of this is the ubiquitous criticism of people out of work based on employment gaps in their resumes, giving rise to silly obligations to indulge in various subterfuges to hide such work history gaps when applying for jobs. To this you have to add the pre-occupation with endlessly lecturing people out of work over resume writing, interview technique, cut and colour of business suit, “body language” etc. Meanwhile nobody does anything serious about the underlying fundamentals concerning the performance of the economy and access to retraining, which are quite separate.

GENERAL – RECOMMENDATIONS, IN ADDITION TO THOSE GIVEN IN THE FINAL REPORT

1. Improved methods of information collection and reporting on unemployment, under-employment and the performance of the economy. Stop mis-labelling people out of work in the manner referred to above.
2. Proper attention by everybody to the true size of economic development and numbers of jobs necessary to solving the problems noted under (1) above.
3. Proper attention to making retraining readily accessible to anybody out of work who needs it in order to get back to work.
4. See also “JOBS AND RETRAINING.pdf” Among other things, this contains some analysis of the deficiencies in existing retraining programs, and the remedies for them. It also contains some reports about the numbers of people applying for every job posted - ranging from 70 to 5,000 - between 2003 and mid- 2009.