# A typology of skills and educational mismatches using a cross-country analysis

*Una tipología de desajustes entre competencias y educación utilizando un análisis comparativo entre países*



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**Abstract**

This paper aims to discuss the value of the diplomas and the situation of downgrading on the labour market. Its novelty is to compare skills both acquired and required in employment, using a self-assessment carried out by young higher education graduates across nine countries of Europe, Japan and Canada. More precisely, we illustrate the incidences of diploma and skill mismatches using three higher education graduate surveys, two international surveys (CHEERS, REFLEX) and a Canadian survey (NGS). We define possible over-education and skill mismatches and then present an empirical typology to show the most frequent cases of mismatches. The ideal situation which corresponds to a perfect match both in terms of diploma and skills only covers a quarter of the graduates. Norwegian and Dutch graduates are more likely to be in this situation. Our results also indicate difficulties for the different educational systems in producing the necessary skills even if a proportion of graduates are overeducated. The mismatch of certain skills is more marked that others in the typology. This is notably the case for the ability to solve problems and analytical thinking.

**Key words**

Skill mismatch, over-education, cross-country analysis, employment of graduates, educational inflation, skill shortage

**Resumen**

Este trabajo tiene como objetivo discutir el valor de los títulos de educación superior y la situación de postergación de los graduados en el mercado laboral. Su novedad consiste en comparar las habilidades adquiridas y requeridas en el empleo, mediante una autoevaluación realizada por los jóvenes graduados de educación superior en nueve países de Europa, Japón y Canadá. Más precisamente, se expone la frecuencia de desajustes entre titulación y habilidades utilizando tres estudios de graduados de educación superior, dos estudios internacionales (Cheers y REFLEX) y una encuesta canadiense (NGS). Definimos posible sobre-educación y desajuste en las habilidades, y a continuación presentamos una tipología empírica para mostrar los casos más frecuentes de desajustes. La situación ideal que corresponde a una combinación perfecta entre titulación y habilidades sólo cubre una cuarta parte de los graduados. Graduados noruegos y holandeses son más propensos a estar en esta situación. Nuestros resultados indican también dificultades para los diferentes sistemas educativos en la producción de las habilidades necesarias, incluso si una proporción de graduados son sobre-educados. La falta de coincidencia de ciertas habilidades es más marcada que otras en dicha tipología. Este es especialmente el caso en



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competencias como la capacidad de resolver problemas y en aplicar el pensamiento analítico.

**Palabras clave**

Desajuste entre habilidades y formación, sobre-educación, análisis comparado entre países, ocupación de los graduados, inflación de títulos, escasez de habilidades

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## I.- INTRODUCTION

Within a context of a development of the knowledge economy, the increase in the level of education of young people is generally considered as an economic advantage. The present research focuses on the discussion of the role diplomas in societies that are facing the challenges of innovation and knowledge. At an individual level, the human capital theory suggests that educational training is the best means to access a high quality job and satisfactory working conditions. However, in recent years, more and more research has highlighted the difficulties for young higher education graduates to find a job that matches their level of qualification. In many countries, the question of over-education has arisen (BÜCHEL *et alii*, 2003; CHABAULT, 2008; BARONE & ORITZ, 2011, GHIGNONI & VERASHCHAGINA, 2014): the graduates with the highest diplomas possibly avoid unemployment, and sometimes job insecurity, at the cost of job and wage downgrading. On this subject, there are numerous methodological debates, which lead certain authors to moderate the extent of such a phenomenon (LEMISTRE, 2010).

This said that the question remains on how do individuals themselves value their diploma. In France, the feeling of over-education (albeit lower than actual over-education) nevertheless can be found among a significant number of young graduates (BEDUW & GIRET, 2011). The former can lead to a strong level of non-satisfaction and lower feeling of belonging to a particular company. Various researches that have looked at the subjective value of diplomas also question the role of diplomas in ranking individuals on the labour market. Indeed, using the International Social Survey Program, TENRET (2011) shows that French higher education graduates are amongst the last (just above Japanese graduates) in stating that diplomas should play an important role in terms of income. It is plausible that with the increase in the frequency of over-education and the belief by graduates themselves that a diploma is insufficient, leads employees (particularly the

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youngest) to accept an unavoidable degrading of the value of their diploma in numerous countries (SÉGAL, 2007).

Various surveys covering the employment of higher education graduates are useful in that they ask young people about the skills they acquired during their studies and those required their work, as well as their position on the labour market (particularly the relationship between their diploma and their job). Moreover, these surveys provide other subjective aspects of the value of diplomas. Indeed, they illustrate how young people perceive the usefulness of their educational training and diploma. Do they consider the latter as a simple parchment to access qualified jobs; or do they see it as a means of learning certain skills that are valued to varying degrees on the labour market? Using these surveys we ask the following questions: According to the graduates, what skills have they acquired that are also required in their jobs? Do certain paradoxical situations arise where the graduates indicate, on the one hand, skill deficits and surpluses, and on the other under or over-education? To what extent do the characteristics of the graduates, of their field of study and of their job explain the different situations that can link skills use to possible over-education?



The novelty of present research is to compare skills in terms of being acquired and required in employment using a self-assessment carried out by the young higher education graduates across nine countries of Europe, Japan and Canada. We compare in turn this information with the frequency and the perceptions of over-education within the different countries' labour markets. In analyzing the experiences of graduates across Europe, Japan and Canada, we can see, in different higher education contexts, how do young graduates perceive the role of their diploma and skills on the labour market. In this analysis, we use three different surveys. The first, the international survey CHEERS (*Careers After Higher Education: A European Research Survey*) that was carried out in eleven European countries and Japan. Almost 35,000 graduates of 1995 were surveyed four years after the end of their studies (TEICHLER, 2007). The second, also an international survey, entitled REFLEX (*Research into Employment and Professional Flexibility*) covered fifthteen European countries and Japan, and almost 40,000 graduates. The latter were surveyed five years after graduating in 2000 (ALLEN & VAN DER VELDEN, 2007). We choose the ten countries that were in both surveys in order to compare the findings with those of the Canadian National Graduate Survey (NGS) of 1997 (which surveyed 43,000 graduates from the year 1995) (KRAHN & BOWLBY, 1999). In each surveys, the graduates had obtained a Bachelor or a Master degree.

We analyse the matches and mismatches between skills and diplomas in two steps (which are described the two following sections). In the first, we present the

different theories that could explain possible over-education, skill surpluses and deficits across the different countries. In the second, we analyse empirically (using the previously mentioned three surveys) the match between educational training and employment, and the subsequent match with skills.

## II.- OVER-EDUCATION AND THE USE OF SKILLS



Over-education is generally considered as a mismatch between the level of education of an individual and that normally requirement by his or her job (the latter educational level being below that of the individual). This, points to a mismatch between the supply and demand of graduates (Mc GUINESS, 2006). Various theories can explain this phenomenon which is independent to actual skills requirements (as perceived for example by young graduates).

The human capital theory cannot *a priori* explain such a phenomenon as the level of education increases the human capital in the same way for all jobs. Within the theory, over-education is in principle only a temporary transitional situation (except if one of the causes is the poor quality human capital; or a requirement by employers of different types of acquired human capital, for example on the job training). The signalling theory in diploma degree inflation perspective (DURU-BELLAT, 2006) considers over-education as being a situation where the supply of diplomas evolves independently from their demand. The drop in the signaling value of diplomas can be explained by the increase in the number of diplomas, of which the skills are not valued in turn by the economy (or only partly if we consider a weak version of the signalling theory). The role of the diploma is to filter the most productive individuals. Employers would react to the increase in the level of education by increasing their requirements in terms of diploma for the same level of productivity (and thus a same requirement in terms of skills).

The theory developed by THUROW (1975) provides a supplementary explanation, in that employers can use a diploma as a signal of the ability to be trained for different types of jobs. The skills acquired by the individuals are not necessarily useful for all occupations. Moreover, over-educated individuals can lack certain skills that they may only be acquired mainly on the job. For the graduates, possessing a high level diploma can be a defensive strategy in order to remain in the queue for the most qualified jobs. This said the latter does neither increase the demand for graduates or the skill demands of the economy. The assignment models put forward by SATTINER (1993) provide with a more general framework of the match between supply and demand. Contrary to the human capital theory, the value given both to the level of education of the individuals and the skills they have acquired depends on the job held by each individual. If the job requirements are below the level of

skills acquired by the graduate, the latter will not be used. However, this theory is complementary to job-search and matching theories. Employers and graduates will acknowledge value of different graduate characteristics according to their relative use.

It is possible to identify six theoretical cases (table 1) of over-education and skill mismatches (for skills in general).

Table 1. Over-education and skill mismatches

| | Over-education | No over-education |
|---|---|---|
| Skill surpluses | Case 1 | Case 4 |
| Required skill level | Case 2 | Case 5 |
| Skill deficits | Case 3 | Case 6 |



In case 1, the supply of graduates and their skills is higher than the needs of the economy. This is an illustration of degree inflation, where the supply of both diplomas and acquired skills are only used in part by the labour market. We are close to a situation of a plethora of skills and qualifications driven mainly by supply (BÉDUWÉ & ESPINASSE, 1995).

Case 2 is slightly different in such that the graduates, albeit over-educated, are in jobs that match their level of skills. The diploma in this case does not play the role of a filter of skills, as the over-education in question does not show skill mismatch. It is possible that there is also the phenomenon of degree inflation, as previously, but the regulation between the demand and the supply of skills is based on other criteria than the diploma (which is perfectly coherent with the assignment models).

The third case is, from the outset, more paradoxical as there is both over-education and skill deficits. From a credentialism point of view, the graduate does not provide the employer sufficient skills. There is also a phenomenon of degree inflation which is stronger than in the previous case. Moreover, the signalling value of the diploma is nonexistent. Even more problematic is that the human capital acquired during the educational training does not meet the needs of the economy.

The situation of the fourth case corresponds to a lack of over-education but skill surpluses. The educational training provides a certain set of skills which are used only in part on the job. This is again coherent with the assignment models and also with THUROW'S job competition model, if the graduates also have skill deficits. The fact that employers do not use all the skills is not necessarily problematic as the diploma allocates the individuals on the labour market.

The case 5 is an ideal situation where there is both non over-education and a match between the skill level acquired by the graduates and that required by employers. The diploma plays its role as a filter and the educational training enables the acquisition of skills useful for employers on the labour market.

Finally, the sixth case is slightly less favorable for the educational training system, as the diploma does not guarantee that the individual has the necessary skills for the job. This is however perfectly coherent with THUROW'S job competition model, where skills are acquired mainly on the labour market. The diploma does filter on the other hand the individuals as there is no over-education.



These different possibilities are not mutually exclusive. There can be mixed situation within a given country, according notably different economic and institutional contexts and different type of labour markets. The increase in unemployment or the job insecurity of certain parts of the labour market, can lead graduates to favour more secure employment but at a lower level. The institutionalised modes of regulating the entry of young people into the labour market (GARONA & RYAN, 1989) and the different modes of the labour market segmention can explain the more frequent occurrences of six cases above. Job markets can favour, for example, matching in terms of skills. However, the effect of segmention on over-education remains complex to analyse (DEKKER *et alii*, 2002). We turn now to see the empirical aspect of the above six case typology.

## III.- A TYPOLOGY OF DIPLOMA AND SKILL MISMATCHES

This section aims to illustrate the incidences of diploma and skill mismatches using the previously mentioned three higher education graduate surveys (CHEERS, REFLEX and NGS). We will define possible over-education and then present an empirical typology to show the most frequent cases of the above six theoretical cases. Finally, we will analyse the factors that could explain why the graduates could find themselves in each of the six situations.

From a methodological point of view there exists various possibilities to measure over-education, i.e. in terms of either diploma mismatches (generally called vertical over-education), field mismatches (horizontal over-education) or skill mismatches. The first measure of over-education in the present research uses a normative approach (sometimes called objective approach). We use the International Standard Classification of Occupations (ISCO 88) defined by experts and used as norm of reference. We consider over-educated an individual who is in an occupation below their level of diploma. More preciously, in our data, this means occupations below the top two levels of *managers* and *professionals.* We choose

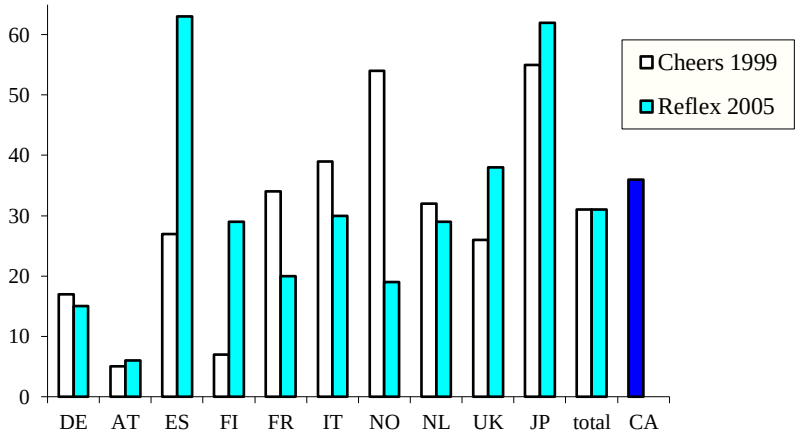
this cut-off point due to the high frequency of the latter types of occupations for higher education graduates (GIRET *et alii*, 2008; CALMAND & EPIPHANE, 2012). Our second measure which looks at mismatch between acquired and required skills is subjective. It is based on the representations of the graduates in the surveys and can imply different individual responses for employees with the same diplomas or in the same jobs (GIRET, 2005).

### 3.1. Normative and subjective over-education



First, we look at the normative over-education using the international classification for the eleven countries covered by the three surveys. Across the three surveys almost 31% of the graduates are in jobs than does not require their higher education diploma (graph 1). Moreover, the proportion of normative over-education is similar for men and women across the surveys (34% women and 28% for men). However, various differences can be found across the countries and surveys. The over-education is approximately the same between 1999 and 2005 (CHEERS and REFLEX) in Austria, Germany, the Netherlands or in Japan. It clearly falls between the two aforementioned surveys for Norway and France and to a lesser extent in Italy. On the other hand, it rises for the United Kingdom, Spain, and Finland. As for the Canadian graduates surveyed in 1997, their profile is similar to the graduates of 2005 in France, the United Kingdom and the Netherlands (36%). Two countries stand out, Japan and Spain where in 2005 (REFLEX) two-thirds of the graduates are in jobs below their level of diploma. This is also the case in the first survey in 1999 (CHEERS) for Japan; whereas in Spain there is an strong increase in six years (+36), which shows the increasing difficulties of the economic situation in the latter country and which increases the gap between the supply and demand of graduates.

Graph 1. Normative occupational over-education (%)




Sources: CHEERS, REFLEX, NGS surveys.
Reading note: The proportion of German graduates who occupy a job where a higher education diploma is not necessary is 17% in the CHEERS survey and 15% in the REFLEX survey.



We then turn to the subjective perception of the graduates of their skills. Amongst the 19 skills (*cf*. methodological note) covered by REFLEX and the 36 skills found in CHEERS, five are similar with Canada: Analytical thinking, Coordinating activities, Computing skills, Ability to write correctly, Ability to work in a team. A sixth one, Ability to solve problems is in both the Canadian and CHEERS surveys. We link the skills and the labour market in two ways. The first crosses in the three surveys (for each of the six skills), the level stated by each graduate in terms of acquired with that of required[1]. We have thus three situations:

- The level of acquired skills is lower than that required in the job, the graduates have skill deficits or are under-educated for their jobs.
- The level of acquired skills is equivalent to that required for their jobs.
- The level of acquired skills is higher than that required in the job, the graduates have skill surpluses or are over-educated for their jobs.

[1] For example, in the REFLEX survey a scale from 1 (very low) to 7 (very high) is used. If the graduate states that their acquired skill level is 3 and the skill requirement is 3, we consider the skill levels to be equivalent; if the acquired level is below that required in the job (levels 1 to 2) there is a skill deficit; if the acquired level is above that required (levels 4 to 7) there is a skill surplus.

**Methodological note**

There is no consensus in the existing literature on the definition of skills or their measure. The terms used in the literature are varied: knowledge, ability, quality, knowledge, skill, know-how, science, faculty, aptitude. The skills in the three surveys of our research also cover different types of skills: knowledge, technical and interpersonal know-how, and aptitudes. In the first survey CHEERS, the graduates state their acquired level for each skill in retrospect to when they graduated: "*Please, state the extent to which you had the following competencies at the time of graduation in 1994 or 1995 and to what extent they are required in your current work (from 1 a very high extent to 5 not at all)".* In the other two surveys, the questions are asked about their skills a few years after graduating. In the REFLEX survey, the graduates answer the following question: "How do you rate your own level of competence? *(from 1 very low to 7 very high) and what is the required level of competence in your current work? (from 1 very low to 7 very high )".* In Canada, the question is phrased thus: *"I'd like to ask you about some of the skills or abilities you may have developed either in school or at work. Would you say your ability is excellent, very good, good, not very good? To what extent do you use this ability in your current (main) job? Would you say to a great extent, to some extent, very little, not at all?"* It is indeed possible that due the opportunities of further training and/or learning on the job, that the skill deficits could be less frequent in the latter two surveys that in the CHEERS survey. In order to construct an empirical typology of the most frequent situations we carried out a factor analysis. This was followed by a cluster analysis (using the axes of the latter factor analysis) to identify the various situations of mismatch. We used in the factor analysis the variables of normative mismatch (over-education and non over-education) as well as the skill mismatches (surplus, required level and deficit).

In the CHEERS survey, the level of skills acquired upon graduation is compared with their requirement level in the job. In this respect, Japan stands out with a large frequency of deficits (60 to 70% of the graduates for all six skills) and especially for ability to solve problems, coordinating activities and computing skills (graph2). These latter two skills are also frequently deficient for all the European countries surveyed. The percentage of students with theses deficits ranges between 69% for Germany and 58% in Spain for coordinating activities and between 59% for France and 47% in the Netherlands for computing skills.

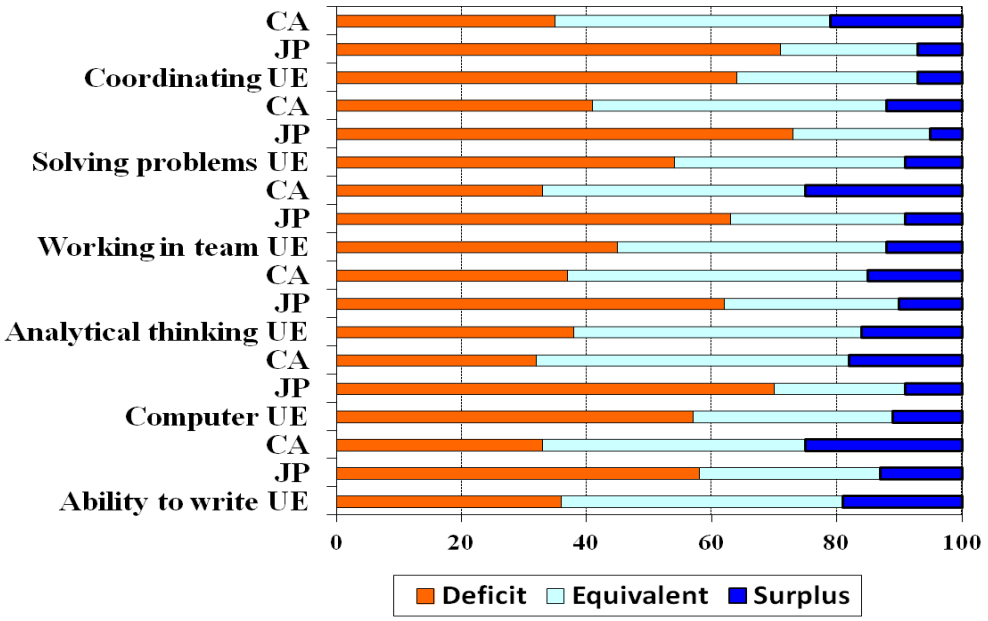
The deficits are frequent, but not negligible, in the Canadian data (30 to 40%) and especially in Europe using the REFLEX data (around 20%) for all the skills analysed. For France and Italy the percentage of graduates with deficits is around a third. Moreover, the situation in Japan appears atypical as half the graduates indicate deficits, notably for coordinating activities, ability to write correctly, analytical

thinking and ability to work in a team. In the three surveys, coordinating activities is often lacking according to the opinion of the graduates.

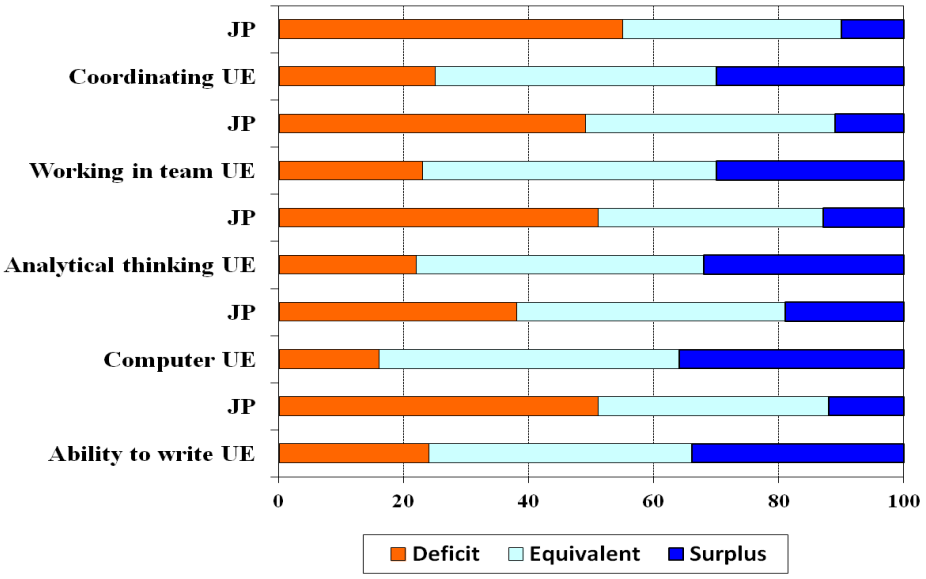
Finally, the graduates who state surpluses are generally from Europe and in the REFLEX survey (around 30% for all the skills analysed). These surpluses vary between 40% in the Netherlands to less than 25% in Finland. Ability to write correctly is frequently in surplus in the three surveys.



Graph 2. Graduates' skill perceptions (CHEERS and Canadian surveys)




Graph 3. Graduates' skill perceptions (REFLEX survey)




Sources: CHEERS, REFLEX, NGS surveys.

Reading note: In the REFLEX survey, 28% of European graduates state a deficit for coordinating activities, 28% a surplus and 44% the required level for their job.

### 3.2. An empirical typology

We then drew up a typology of the main mismatches using the CHEERS and REFLEX surveys (*cf*. methodological note), which makes it possible to identify the most representative situations across the different countries. In addition, we ran multinomial logit regressions covering the ten countries, whilst controlling for graduate characteristics, study characteristics (type of diploma, field of study, placement, working during studies) and employment characteristics (fixed contract/temporary, full-time/part-time), in order to get a better understanding of the factors that lead the graduates to be in a particular situation rather than another. We use the same situation (case 4 assignment and job competition) and country (France which has a relative average situation in terms of over-education and skill mismatches), as reference in the two regression models. Using the six possibilities defined earlier (table 1), the following table 2 give a synthesis of the results. We only present odds ratios corresponding to the country effects which are derived from the logistic regression.



In both the surveys, one of the first findings is that on the whole, the results do not portray particular country models. Indeed, for the CHEERS survey the case 1 (degree inflation) accounts for 9% of the graduates. These graduates are more than average over-educated and state surpluses in the ability to solve problems, analytical thinking and coordinating abilities. Japanese, Spanish and Italian graduates are more likely to be in this situation, all else equal. This being despite the fact, that the countries in question are different both in their size of the supply of their graduates and, in the characteristics of their labour market. The case 3 (credentialism) covers around 18% of the graduates. The latter are in a paradoxical situation of over-education and deficits in computing skills and the ability to solve problems. Italian, Japanese and Norwegian graduates are more susceptible to be in this case (controlling for graduate, field and employment characteristics). Our analysis shows that these graduates prefer to have job security even though they are over-educated and have skill deficits. On the other hand, continental European countries and the United Kingdom seem to escape this situation of over-education and a lack of skills. Finally, the case 6 (job competition and filter) affects the largest share of the graduates (a third). This case is characterized by no or low over-education and deficits in three skills: the ability to solve problems, analytical thinking and coordinating abilities. Japanese, Austrian and Finnish graduates have a higher probability to be in this situation.

Table 2. The most frequent situations of over-education and skill mismatch

| | Over-education | No or low over-education |
|---|---|---|
| **CHEERS** survey | | |
| Skill surpluses | **Case 1 Degree inflation** (9%)<br>*Problem solving, analytical thinking, coordinating abilities*<br>**Japan (1.6) Spain (1.4) Italy (1.3)** | **Case 4 Assignment and job competition** (17%)<br>*Computing skills, ability to write* |
| Required skill level | **Case 2 Assignment** | **Case 5 Filter (**22%)<br>**Italy (1.6) Norway (1.6) Netherlands (1.3)** |
| Skill deficits | **Case 3 Credentialism** (18%)<br>*Computing skills, problem solving*<br>**Italy (4.9) Japan (3.2) Norway (1.5)**<br>Austria (0.3). United Kingdom (0.3)<br>Finland (0.4). Germany (0.6)<br>Netherlands (0.7) | **Case 6 Job competition and filter (**34%)<br>*Problem solving, analytical thinking, coordinating abilities*<br>**Japan (2.7) Finland (1.4) Austria (1.2)**<br>Norway (0.8) |
| **REFLEX** survey | | |
| Skill surpluses | **Case 1 Degree inflation (**26%)<br>**Spain (1.8). Netherlands (1.3)**<br>Japan (0.7) | **Case 4 Assignment and job competition (**13%)<br>*Analytical thinking* |
| Required skill level | **Case 2 Assignment (**18%)<br>**Japan (7.8) Spain (7.5)**<br>**United Kingdom (3.0)**<br>**Italy (1.8) Netherlands (1.8)**<br>**Finland (1.6)**<br>Austria (0.4) | **Case 5 Filter (**24%)<br>**Norway (1.8) Germany (1.7)**<br>**Netherlands (1.6) Austria (1.6)**<br>**Japan (1.4) United Kingdom (1.5)**<br>**Spain (1.3) Finland (1.3)** |
| Skill deficits | **Case 3 Credentialism** | **Case 6 Job competition and filter (**31%)<br>*Analytical thinking*<br>**Japan (7.4)**<br>Austria (0.3) Netherlands (0.4)<br>Norway (0.4) Germany (0.5)<br>United Kingdom (0.6) |

Source: CHEERS and REFLEX surveys.

Reading note: in the CHEERS survey and in case 1 (which covers 9% of the graduates). The graduates in question are over-educated and have surpluses in problem solving, analytical thinking and coordinating abilities. A Japanese graduate is more likely (1.6 odds ratio) to be in this situation than a French graduate and the case 4, all else equal. All Results in odds ratio.

The REFLEX survey shows also that certain countries have similar profiles, even if the latter are difficult to interpret. Japanese, Italian and Spanish are in a similar situation. The graduates have high levels of over-education despite having the



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required level of skills (*cf*. case 2 assignment). This points out particularly to problems due to the labour market in each country. On the other hand, graduates from another group of countries (Austria, the Netherlands, Norway, Germany and the United Kingdom) find themselves with very little skill mismatches and average over-education (*cf*. for example case 5 filter).

## IV.- CONCLUSION



It is interesting to note foremost that if we consider both surveys, we find that all the situations are possible. This being true even for those which could be considered at first hand as paradoxical, such as over-education and skill deficits (case 3 credentialism), or no over-education and skill surpluses (case 4 assignment and job competition). The ideal situation which corresponds to a perfect match both in terms of diploma and skills only covers a quarter of the graduates (case 5 where the diploma plays a filter role ). Norwegian and Dutch graduates are more likely to be in this situation in both surveys (all else equal), and compared to French graduates. For the other graduates there are mismatches. The most frequent case is characterised by a low level of over-education and a lack of analytical thinking, ability to solve problems and coordinating abilities (case 6 job competition and filter). This indicates difficulties for the different educational systems in producing the necessary skills even if the graduates generally find highly qualified jobs. The mismatch of certain skills is more marked that others in the typology. This is notably the case for the ability to solve problems and analytical thinking.

This said, it appears difficult to draw up a typology that fits both surveys, different patterns exist even for the same country. For example, the Japanese graduates, who are frequently over-educated, are in a better situation in the second survey (REFLEX) in terms of skill mismatches (controlling for graduate, field and employment characteristics).

Finally, this approach has made it possible to contextualize certain skills, acquired and required in the job, using the perceptions of graduates from various countries (and for the job they hold). By nature skills are related both to the individual and their job. In numerous countries diploma supplements increasingly include a list of knowledge and skills. This encourages both young people and also the educational systems (that provide the diplomas), to take more note of the knowledge and skills valued on the labour market. Indeed, almost a third of the graduates in our research state a skill mismatch despite having a job corresponding to their level of diploma. Further research could look more closely as the representations of graduates. Indeed, do the latter believe that skills are to be mainly acquired on the labour market? In addition, the surveys used in our research measure skills by self-

assessment. There is thus the risk of individual subjective bias. Moreover, such surveys are also limit the number of specific technical skills covered. The latter type of skills can give the edge to the graduates on the labour market. It would be useful to look notably at the new emerging skills required by the knowledge economy.

## REFERENCES


ALLEN, J. & VAN DER VELDEN, R. (2001). Educational Mismatches versus Skill Mismatches: Effects on Wages, Job Satisfaction, and On-the-Job Searc". *Oxford Economic Papers*, 53(3), 434-452.

ALLEN, J. & VAN DER VELDEN, R. (2007). *The Flexible Professional in the Knowledge Society: General Results of the REFLEX Project.* Research Centre for Education and the Labour market. The Netherlands: Maastricht University.

BARONE, C. & ORITZ, L. (2011). Overeducation among European,University Graduates: a comparative analysis of its incidence and the importance of higher education differentiation. *Higher Education*, 61 (3), 325-337.

BÉDUWÉ, C. & ESPINASSE, J.M. (1996). France: politique éducative, amélioration des compétences et absorption des diplômés par l'économie. *Sociologie du Travail*, 4, 527-556.

BEDUWE, C. & GIRET, JF. (2011). Mismatch of vocational graduates: What penalty on French labour market? *Journal of Vocational Behavior*, 78 (1), 68-79.

BÜCHEL, F., DE GRIP, A. & MERTENS, A. (2003). *Overeducation in Europe: Current Issues in Theory and Practice*. Massachusetts: Edward Elgar.

CALMAND, J. & EPIPHANE, D. (2012). L'insertion professionnelle des études supérieures : des diplômés plus égaux que d'autres…. *Formation Emploi*, n°117, Revue française de sciences sociales, La documentation française, 11-28.

CHABAULT, V. (2008). Sur-éducation et déclassement socioprofessionnel dans l'accès à l'emploi: état des lieux des publications nord américaines et françaises. *Revue des sciences de l'éducation,* vol. 34, n°1, Montréal, 185-202.

DEKKER, R., DE GRIP, A. & HEIKE, H. (2002). The impact of training and overeducation on career mobility in a segmented labour market. *International Journal of Manpower*, 23(2), pp.106-125.

DURU-BELLAT, M. (2006). *L'inflation scolaire: les désillusions de la méritocratie.* Paris: La République des idées, éditions du Seuil.

GIRET, J-F. (2005). Quand les jeunes s'estiment déclassés. In: Giret, J-F, Lopez, A., Rose J. (eds.) *Des formations pour quels emplois?* La Découverte, collection Recherches, (pp. 279-288).

GIRET, J-F., GUEGNARD, C. & PAUL, J-J. (2008). Genre et valorisation des compétences sur les marchés du travail en Europe. *Education & Formations*, n°78, novembre, 193-202.

GHIGNONI, E. & VERASHCHAGINA, A. (2014). Educational qualifications mismatch in Europe. Is it demand or supply driven? *Journal of Comparative Economics*, *42*(3), 670-692.

ILO (1990). *Internationale Standard Classification of Occupations, ISCO-88*. Geneva: International Labour Office. ILO [Site consulted the 4th of June 2012]: http/laborsta.ilo.org.




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REVISTA DE EDUCACIÓN Y DERECHO. *EDUCATION AND LAW REVIEW*
Número 12. Abril 2015 – septiembre 2015

KRAHN, H. & BOWLBY, J. W. (1999). Education-Job Skills Match: An Analysis of the 1990 and 1995 National Graduates Surveys. Research Paper R-00-1-1E. Ottawa: Human Resources Development Canada and Statistics Canada.

LEMISTRE, P. (2010). *La formation initiale: une valeur sûre pour les jeunes?* Presses Universitaire de l'Université Toulouse 1 Capitole, 269 p.

MC GUINNESS, S. (2006). Overeducation in the labour market. *Journal of economic surveys*, vol. 20, n°3, 387-418.

OECD (2007) *Regards sur l'éducation 2007.* Paris: Editions OCDE [Site consulted the 4th of June 2012] : http://www.oecd.org/dataoecd/16/51/39308942.pdf.

SATTINGER, M. (1993). Assignment models of the distribution of earnings. *Journal of Economic Litterature*, vol. XXXI, June, 831-880.

SEGAL, E. (2007). Un regard international sur la «logique compétence» : déstabilisation des systèmes productifs et des systèmes de formation. *Paper presented at Journées Internationales de Sociologie du Travail,* London.

TEICHLER, U. (Ed) (2007). *Careers of University Graduates, Views and Experiences in Comparative Perspectives.* Higher Education Dynamics 17. United Kingdom: Springer.

TENRET, E. (2011). Les étudiants et le mérite. À quoi bon être diplômé ? *Collection Etudes et Recherche,* Observatoire de la vie étudiante. Paris: La Documentation française.

THUROW, L. C. (1975). *Generating Inequality: Mechanics of Distribution in U.S. Economy*. New York: Basic Books.



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