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## **Employabilité des Jeunes en France : Influence des Réseaux et des Canaux Formels de Recherche d'Emploi**



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## **Employabilité des Jeunes en France : Influence des Réseaux et des Canaux Formels de Recherche d'Emploi**

### ***Résumé :***

Améliorer l'accès et la qualité de l'emploi des jeunes figure parmi les priorités en France. Ainsi, ce travail doctoral aide à comprendre l'efficacité et les limites des canaux formels et informels. Les trois études empiriques de cette thèse fournissent un état des lieux de l'employabilité des jeunes en mettant l'accent sur les tendances concernant leurs pratiques de recherche et la qualité des emplois qu'ils obtiennent. Ces trois études sont précédés par une introduction générale et une revue de littérature. La première est dédiée à l'analyse des déterminants de l'accès à l'emploi à travers un mode de recherche bien déterminé. Dans le cadre de cette analyse, les effets de certains facteurs tels que l'origine, le genre, le lieu de résidence et l'éducation sont mis en évidence. La deuxième s'interroge sur l'influence des modes d'accès sur la qualité et la satisfaction de l'emploi obtenu. La troisième s'intéresse aux demandeurs d'emploi afin de comprendre leurs préférences et leurs stratégies de prospection. Cette dernière étude de la thèse est dédiée à la comparaison entre les pratiques (en termes d'intensité et de préférences) employées par les individus en emploi et celles menées par les chômeurs. Nos conclusions suggèrent un renforcement du rôle joué par les intermédiaires institutionnels de placement (en particulier le service public) mais aussi la nécessité de renforcer davantage le rôle des établissements scolaires afin de promouvoir le réseau scolaire comme moyen de recrutement.

*Descripteurs :* Marché du travail des jeunes, recherche d'emploi, réseaux sociaux, réseaux scolaires, intermédiaires formels de recrutement, recherche dans l'emploi, qualité de l'appariement.



## **Youth employability in France : The Influence of Networks and Formal Job Search Channels**

### ***Title and Abstract :***

Improve youth employment's quality is a priority in France. This thesis focuses on job search and job access trends, in addition to the role played by the informal and formal search channels on the job matching issue. It helps understanding the informal and formal channels' efficiency and limitations in the purpose of emerging several policy responses. These would shape future investments in strengthening the part played by the formal employment intermediates (particularly the public one) and the school network in order to ameliorate youth employment as France continues to prioritize youth in its national policy agendas. This PhD work offers valuable lessons learned on "who uses what" and on "what works" better for youth employment through three empirical studies. These three studies are preceded by a general introduction and a literature review. The first chapter is dedicated to the analysis of the job access channel's determinants. As part of this chapter, the effects of some factors such as origin, gender, place of residence and education are emphasized. The second chapter examines the influence of these access channels on the quality and the satisfaction with the obtained job. The third chapter focuses on the comparison of on- and out-of-the job seekers' preferences, search intensity and strategies. Our findings suggest a further strengthening of the role played by the public employment service as well as the role of schools as a possible recruitment channel.

**Keywords :** Youth labor market, job search, social networks, school networks, formal employment intermediates, on-the job search, matching quality



## ***Principales définitions et abréviations***

**La classe jeune :** Il s'agit de tout individu âgé entre 15 et 24 ans, ainsi, une définition aussi sommaire est à l'origine d'une absence d'homogénéité au sein de ce groupe. Depuis près de trente ans, leur situation notamment au niveau de l'emploi est à l'origine de graves difficultés d'insertion professionnelle. Cette thèse s'intéresse aux jeunes actifs âgés de 15 à 30 ans. En effet à l'âge de 24 ans plusieurs jeunes choisissent de poursuivre de longues études et risquent d'être en cours de préparation d'un diplôme et ne seront donc pas concernés par la recherche d'emploi avant l'âge de 25 ans. Elargir la tranche d'âge jusqu'à 30 ans permettra d'englober un échantillon plus large et de considérer un nombre plus important de jeunes actifs.

**Le chômeur au sens du Bureau international du travail (BIT) :** Il s'agit de toute personne en âge de travailler (15 ans ou plus) qui :

- n'a pas travaillé au cours de la semaine de référence ;
- est disponible pour travailler dans les deux semaines ;
- a entrepris des démarches effectives de recherche d'emploi ou a trouvé un emploi qui commence dans les trois mois.

Le taux de chômage au sens du BIT est le nombre de chômeurs rapporté à la population active totale (actifs ayant un emploi et chômeurs).

**L'employabilité en tant que concept :** A priori, il n'y a pas une définition officielle et unique de l'employabilité à part que celle-ci renvoie systématiquement à la capacité d'individu à être employé, fréquemment utilisée en tant que la probabilité pour qu'un individu trouve un emploi (Cart, 1998). A partir des apports de la littérature anglo-saxonne sur le thème, Hillage and Pollard (1998) arrivent à une définition du concept de l'employabilité à partir de trois éléments principaux tels que cités ci-dessous :

- la capacité à obtenir un emploi initial, conditionnée entre autres par le système

éducatif ;

- la capacité à conserver son emploi et à mener les transitions entre les emplois et les rôles dans une même organisation ;
- la capacité à trouver un autre emploi si nécessaire, entendue comme la capacité et la volonté des individus dans le management des transitions d'emploi entre les organisations et en leur sein.

D'autres auteurs considèrent ce concept en tant que l'ensemble des compétences et des conditions de gestion des ressources humaines nécessaires et suffisantes pour permettre au salarié de retrouver à tout moment un emploi, à l'intérieur ou à l'extérieur de l'entreprise, dans des délais et des conditions raisonnables (Finot (2000) ; Hategekimana et Roger (2002)). Elle est aussi, entendue comme "la capacité relative que possède un individu à obtenir un emploi satisfaisant compte tenu de l'interaction entre ses propres caractéristiques personnelles et le marché du travail" (Définition du Canadian Labor Force Development Board, Gazier, 1999).

**Intermédiaires institutionnels de recrutement :** Pôle emploi, mission locale, APEC ou cabinets privés de recrutement. En ce qui concerne l'intermédiaire public, Pôle emploi est un opérateur du service public de l'emploi en France. Il est issu de la fusion entre l'ANPE et le réseau des Assedic qui est devenue effective par la loi du 13 février 2008 relative à la réforme du service public de l'emploi. Il a pour mission d'accompagner tous les demandeurs d'emploi dans leur recherche jusqu'au placement, assurer le versement des allocations aux demandeurs indemnisés, aider les entreprises dans leurs recrutements et recouvrer les cotisations. L'objectif était de créer un opérateur qui permette notamment aux demandeurs d'emploi d'avoir un seul interlocuteur pour la gestion des offres d'emploi et de leur allocation.

**Réseaux sociaux :** L'utilisation des modèles de réseaux sociaux en tant que concept en sociologie est fréquent (Burt, 1980). L'analyse des réseaux sociaux est l'étude des structures

sociales (Furht, 2010). En général, un réseau peut se définir comme une structure de liens et d'interactions entre individus. Il peut se manifester dans une grande variété de contextes sociaux et économiques, qui n'ont pas nécessairement trait au "social media" sur Internet. Par exemple, les réseaux d'anciens d'une université ou école de commerce ; les réseaux d'amis famille ou voisins ; les réseaux de parenté, etc. Ces réseaux font l'objet d'analyse de la part des sociologues depuis les travaux de Moreno (1934), avec une tradition de recherche qui s'est progressivement affinée, accumulant un corpus important de méthodes, résultats et connaissances (Freeman, 2004).

**SUZ** : Sensitive Urban Areas/zones urbaines sensibles (ZUS) sont des territoires infra-urbains définis par les pouvoirs publics pour être la cible prioritaire de la politique de la ville, en fonction des considérations locales liées aux difficultés que connaissent les habitants de ces territoires.

**RUR** : Rural area/Zone Rurale

**JS** : Job Seekers/Chercheur d'emploi

**CMP** : Conditional mixed process estimator with multilevel random effects and coefficient.

**EEC** : Enquête Emploi en Continue menée par l'Insee. Cette enquête vise à observer à la fois de manière structurelle et conjoncturelle la situation des personnes sur le marché du travail. Elle s'inscrit dans le cadre des enquêtes "Forces de travail" défini par l'Union européenne ("Labour Force Survey").

C'est la seule source fournissant une mesure des concepts d'activité, chômage, emploi et inactivité tels qu'ils sont définis par le Bureau international du travail (BIT). Thèmes abordés Les questions portent sur l'emploi, le chômage, la formation, l'origine sociale, la situation un an auparavant, et la situation principale mensuelle sur les douze derniers mois.

Réalisée par l'Insee, depuis 1950, l'enquête Emploi est la source statistique qui permet de mesurer le chômage au sens du BIT. Depuis 2003, l'enquête Emploi est trimestrielle et sa collecte auprès d'un échantillon de ménages, est réalisée en continu sur toutes les semaines de chaque trimestre.





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*À Mes Deux Perles Lina et Samar*

# Introduction





*"Labor economists have long recognized that many workers find jobs through friends and relatives ; personnel researches argue that employee referrals are a useful device for screening job applicants. Because the use of employee referrals is both widespread and purposive, social structure -the pattern of social ties between individuals- may play an important role in determining labour market outcomes."*

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Montgomery (1991)

*"Labor economists have long recognized that many workers find jobs through friends and relatives; personnel researches argue that employee referrals are a useful device for screening job applicants. Because the use of employee referrals is both widespread and purposive, social structure -the pattern of social ties between individuals- may play an important role in determining labour market outcomes."*

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Montgomery (1991)

Le taux de chômage des jeunes de 15-30 ans ne cesse d'augmenter en France depuis 2008. En 2016, il représente plus du double de la population active (25% comparé à 10.3% (Eurostat, 2016)). Par conséquent, l'accès des jeunes à l'emploi dans le pays constitue une préoccupation majeure aussi bien sur le plan économique que social. Si l'emploi des jeunes figure parmi les actions urgentes à entreprendre, il est ainsi important de s'interroger sur les facteurs, comme la stratégie de recherche d'emploi, qui sont susceptibles de conditionner significativement le recrutement ainsi que la qualité de l'emploi. C'est le parti pris de ce travail doctoral. En effet, cette thèse se focalise sur l'analyse de l'"employabilité" des jeunes en France à travers l'étude de trois axes principaux : la recherche, l'accès et la qualité de l'emploi.

Tout d'abord, il convient de définir l'employabilité. A priori, il n'existe pas de définition unique et officielle de l'employabilité, mis à part que celle-ci renvoie à la capacité d'un individu à être employé (Cart, 1998). Ce concept fait aussi référence à la capacité d'un individu à faire évoluer ses perspectives de carrière et ses performances sur le marché du travail. C'est ainsi qu'une définition du Canadian Labor Force Development Board (1994) indique que "L'employabilité est la capacité relative que possède un individu à obtenir un emploi satisfaisant compte tenu de l'interaction entre ses propres caractéristiques personnelles et le marché du travail" (Gazier, 1999))."

Dans ce sens, étudier l'employabilité des jeunes va de pair avec l'étude de leurs stratégies de recherche d'emploi. En effet, la phase de recherche d'emploi est d'une importance cruciale puisqu'elle affecte la probabilité de s'insérer efficacement sur le marché du travail.

Cette étape de recherche d'emploi a suscité l'intérêt de plusieurs chercheurs dont Myers and Shultz (1951); Stigler (1961, 1962) Rees and Shultz (1970); Jovanovic (1979, 1984); Corcoran et al. (1980); Mortensen (1986); Granovetter (1974, 1995). Ces auteurs étudient les modes dont font usage les individus pour trouver un travail. Autrement dit, s'il s'agit de déterminer si les emplois sont obtenus grâce à des annonces, cabinets de recrutement, application directe, réseaux ou tout autre mode de recrutement.

Ainsi, afin d'examiner l'employabilité des jeunes, nous sommes amenés dans ce qui suit à nous interroger aussi sur le rôle que peut jouer l'étape de la recherche d'emploi en se focalisant sur l'étude des modes d'accès à l'emploi ainsi que leurs effets sur la qualité des emplois obtenus.

Comment améliorer donc l'employabilité des jeunes et de garantir ainsi leur stabilité sur le marché du travail? La question de l'insertion professionnelle des jeunes a occupé l'espace du débat publique Français depuis au moins trois décennies. Depuis 1975, une variété de politiques d'aide à l'emploi des jeunes a été proposée et mise en place par différents acteurs de la vie politique. Ces différentes mesures touchent des publics différents et offrent des statuts différents aux jeunes bénéficiaires. Ces politiques visent surtout le renforcement du rôle des acteurs publics dans l'insertion professionnelle des jeunes, mais cherchent aussi à rendre le recrutement de ces jeunes plus attractif à l'égard des entreprises.

Parmi ces dispositifs figure un ensemble de mesures visant la pédagogie et l'enseignement (Ryan, 2001). Ces mesures s'appuient sur l'idée que le problème de l'insertion des jeunes vient d'un enseignement inadapté qui ne concorde pas avec les besoins réels du marché<sup>1</sup>. Ces mécanismes proposés par l'Etat ont pour vocation de rendre plus fluide la transition de l'école à l'emploi. Ceci peut se faire par le biais de dispositifs tels que

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1. Plus tard dans ce chapitre introductif, une section abordera certains travaux en France qui se sont intéressés au problème de la transition de l'école à l'emploi ainsi qu'à l'importance du niveau d'éducation dans l'insertion. Une analyse intéressante est présentée par Behrens et al. (2007), "La transition de l'école à la vie active ou le constat d'une problématique majeure", *Institut de recherche et de documentation pédagogique (IRDPA)*.

le programme d'alternance : contrat d'apprentissage, contrat d'adaptation et contrat de qualification.

Ainsi un rapprochement entre la théorie et la pratique apparaît comme un objectif primordial pour ces dispositifs dans le but de rendre plus concret l'adéquation entre compétences acquises à l'école et savoirs nécessaires dans l'entreprise. Les dispositifs en alternance sont les plus importants en terme de nombre de bénéficiaires puisque ces actions visent environ deux tiers des bénéficiaires de l'ensemble des mesures de la politique de l'emploi en faveur des jeunes (Issehnane, 2009).

Compte tenu de ces mesures et afin de faire face au chômage, les jeunes mettent en place des stratégies différentes afin d'augmenter leurs chances de trouver un emploi. Certains choisissent de cumuler des contrats précaires dans le but d'acquérir une expérience ou un emploi stable à long terme à travers le développement d'un réseau de contacts professionnels. D'autres choisissent d'investir dans la recherche d'emploi à travers des procédures formelles (ou institutionnelles : agences publiques, agences privées, annonces, concours) ou d'autres informelles (par réseaux personnels, professionnels et scolaires ou candidatures directes). Ainsi, l'insertion professionnelle commence d'abord par l'étape de la prospection : "job search". Cette étape est d'une importance cruciale dans la détermination de la trajectoire professionnelle des individus. La stratégie de prospection diffère selon le jeune, ses qualifications et son environnement socio-économique. Cette phase de recherche d'emploi suscite depuis longtemps l'intérêt de plusieurs auteurs. Les pionniers sont principalement Stigler (1961), Diamond (1982), Jovanovic (1979, 1984), Mortensen (1987), Mortensen and Vishwanath (1994), Mortensen and Pissarides (1999).

Toutefois, si la littérature économique est riche en ce qui concerne la modélisation de la recherche d'emploi, elle reste à ce jour peu développée lorsqu'il s'agit d'expliquer le choix des stratégies mobilisées par les jeunes afin de s'insérer sur le marché du travail (Kramarz et Skans, 2011). Plus précisément il reste à savoir dans quelle mesure le recours des jeunes aux méthodes informelles plutôt qu'institutionnelles permet-il à la fois l'accès à l'emploi mais aussi l'amélioration de la qualité de ce dernier ? D'où l'intérêt de ce travail

doctoral, à savoir l'influence des modes de recherche d'emploi sur l'employabilité des jeunes.

Cette thèse vise à apporter des réponses à ces questions en utilisant une approche empirique à partir de données représentatives des travailleurs jeunes en France. Ce travail doctoral a pour objectif de fournir un ensemble de suggestions permettant d'évaluer et de comparer l'efficacité des différents canaux de recherche d'emploi, et en particulier les réseaux sociaux. Il faut noter que ce travail de recherche n'est pas le premier à souligner l'importance des réseaux sociaux sur le marché du travail. Il existe une littérature considérable tenant compte de l'impact des réseaux personnels à travers l'information qu'ils transmettent. Toutefois, en considérant uniquement les jeunes actifs, cette thèse distingue clairement deux types de réseaux : le réseau personnel ou professionnel et le réseau formé par l'établissement scolaire. Cette distinction, qui est très peu explorée dans la littérature existante, s'inscrit donc parmi les apports de ce travail de recherche.

Dans le premier chapitre, les déterminants de l'accès à l'emploi à travers un mode de recherche bien déterminé sont analysés. Dans le cadre de ce chapitre, les effets de certains facteurs tels que l'origine, le genre, le lieu de résidence et l'éducation sont mis en évidence.

Le deuxième chapitre s'interroge sur l'influence des modes d'accès sur la qualité et la satisfaction de l'emploi obtenu. Dans ce cadre d'analyse, nous montrons que parmi les individus en emploi, une part considérable affiche une insatisfaction par rapport à leur emploi. Ces jeunes insatisfaits sont susceptibles de retourner sur le marché de travail afin de trouver un nouvel emploi qui correspond mieux à leurs attentes.

Il en découle donc dans un troisième chapitre de se focaliser sur les actifs (chômeurs inclus) à la recherche d'emploi afin de comprendre leurs préférences et leurs stratégies de prospection. Cette dernière partie de la thèse est dédiée à la comparaison entre les pratiques en termes d'intensité et de préférences utilisées par les individus en emploi et celles menées par les chômeurs.

Tout d'abord, une présentation de l'état des lieux du marché du travail des jeunes en

France semble indispensable.

Labaye et al. (2012) estiment que pour que la France puisse répondre à ses ambitions "même modérées" en matière d'emploi, elle doit créer deux fois plus de nouveaux emplois chaque année par rapport à ce qu'elle a déjà fait au cours des 20 dernières années. Le même rapport suggère que si la France n'agit pas de manière efficace, le pays est susceptible de se retrouver d'ici 2020 face à 2,2 millions de travailleurs hautement qualifiés et 2,3 millions de travailleurs peu qualifiés, incapables d'accéder à un emploi. Le problème du chômage des jeunes peut être expliqué par la conjoncture qui s'ajoute aux différentes transformations qui caractérisent leur marché du travail.

En effet, la forte concentration des jeunes dans des contrats à court terme et travail temporaire (considérés comme des emplois précaires) peut expliquer pourquoi leur emploi est si sensible aux cycles économiques<sup>2</sup>. Ce type de contrat temporaire (intérim, CDD, etc.) est associé à une grande sensibilité aux fluctuations conjoncturelles. Ce constat est souligné clairement dans un rapport récent de la DARES (2013), où il est montré, que ce soit pour un premier accès ou après une courte expérience, que les actifs âgés de 15-24 ans sont plus sensibles aux changements cycliques comparés aux autres actifs ayant davantage d'expérience professionnelle (DARES, 2013). Labaye et al. (2012) mettent en évidence que si la part du travail précaire représente 13% des emplois en France, elle représente aussi 60% des emplois détruits depuis la crise.

Si certains auteurs mettent en avant que le taux de chômage des jeunes est d'autant plus élevé durant les périodes de récession économique, est-il possible alors de considérer la crise comme principale cause de la précarité des jeunes sur le marché du travail en France ? A ce sujet, un certain nombre d'études prouve que la crise économique de 2008-2009 n'a fait qu'aggraver la situation précaire de l'emploi des jeunes (Lefresne, 2012). En effet, il y a eu une émergence de certains problèmes affectant la transition de l'école à l'emploi (Scarpetta et al., 2010). Avant que le déclenchement de la grande crise économique, le

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2. Un tiers des 15-29 ans possèdent un emploi à statut précaire, contre 8% des 30-49 ans (Observatoire des inégalités, 2014)

marché du travail des jeunes s'était quelque peu amélioré dans la plupart des pays de l'OCDE, y compris dans la France. En effet, les entreprises cherchaient à recruter plus de jeunes afin d'améliorer leur productivité, de diversifier la culture d'entreprise et d'exploiter de jeunes compétences et de nouvelles qualifications.

Kahn (2010) montre que les conséquences du marché du travail des diplômés de l'université dans une mauvaise économie ont des effets négatifs considérables qui persistent sur les salaires. Les gains sont nettement inférieurs à ce qu'ils auraient pu être si le diplômé avait intégré le marché du travail au bon moment. De plus, l'auteur rajoute que les cohortes qui obtiennent leur diplôme dans une situation économique critique ont tendance à se retrouver dans des emplois précaires. Les travaux de Giuliano et Spilimbergo (2009) suggèrent que les jeunes qui grandissent pendant les récessions ont tendance à croire que le succès dans la vie dépend plus de la chance que de l'effort.

Ainsi, au-delà des problèmes liés à la crise, à la transition de l'école à l'emploi et au "déclassement des diplômés", ce travail doctoral étudie le rôle joué par les différents canaux de recherche ainsi que leur performance sur le marché du travail des jeunes.

Après avoir mis en évidence le contexte et l'intérêt de la thèse, le restant de cette introduction générale s'organise comme suit. Une première section discute l'importance du niveau d'éducation et donc du diplôme comme un signal de productivité et/ou une protection contre le chômage. La deuxième section s'intéresse aux récents changements qui ont caractérisé le travail des jeunes en France. La troisième section est consacrée au rôle que peuvent jouer les canaux d'accès à l'emploi. La quatrième section est consacrée à la distinction entre demandeurs d'emploi selon leur statut sur le marché du travail, à savoir chômeurs ou en emploi. Enfin, la dernière section est dédiée au résumé des apports des trois chapitres empiriques formant cette thèse.

## La protection relative offerte par le diplôme

Dans les années soixante, les travaux à l'origine des fondements de la théorie du capital humain soulignent que l'éducation est l'investissement le plus efficace afin d'améliorer la productivité individuelle et de garantir la croissance globale (Becker, 1975). Dès lors, l'éducation est envisagée comme un investissement rentable à termes, permettant de se protéger contre le chômage.

En général, il existe une grande disparité en matière d'emploi chez les jeunes qui ont quitté l'école dans les pays de l'OCDE. Le taux d'emploi des jeunes âgés de 15-29 ans qui ont un diplôme de l'enseignement supérieur est plus élevé que celui des jeunes qui ont un diplôme du secondaire, qui est à son tour plus élevé que les jeunes sans diplôme.

Dans ce sens, l'observation du taux de chômage en fonction du niveau de scolarité, montre que ce taux est "inversement proportionnel" au niveau du diplôme. En général, plus le niveau de diplôme possédé est élevé, plus le taux de chômage diminue. Laflamme (1996) souligne que l'importance d'un diplôme dépend de son marché, c'est-à-dire de sa rareté ou de son abondance.

Face à cette situation, les jeunes sont incités à acquérir des niveaux d'éducation de plus en plus élevés en contre partie des promesses d'emploi et de salaires croissants en fonction des diplômes obtenus. Seulement, la question qui se pose à ce niveau est la suivante : l'augmentation du niveau d'éducation des diplômés est-elle accompagnée d'une situation toujours plus avantageuse sur le marché du travail ? Autrement dit, le diplôme possède-t-il toujours une valeur privilégiée sur le marché et protège-t-il contre le chômage et la précarité ?

La théorie du filtre (Arrow, 1973) souligne que le système d'éducation n'accroît pas les capacités productives des individus mais joue le rôle de signal et de filtre en situation d'asymétrie d'information. Par conséquent, les plus diplômés se verront attribuer des emplois plus qualifiés et plus stables. Cette situation génère des disparités au niveau des salaires en asymétrie d'information, ce qui induit une certaine inégalité entre les gains individuels



et les gains collectifs que rapporte l'éducation. En effet, il y aura une inégalité entre la productivité et la rémunération associée.

Dans cette perspective, les compétences des agents seront dévaluées, ce qui engendre un "déclassement salarial". Si l'éducation n'est pas adaptée à la demande du marché et qu'elle ne parvient pas à développer des niveaux différents mais élevés de productivité, alors la demande d'emploi va concerner un nombre élevé d'individus disposant d'un même niveau de diplôme. Par conséquent, le processus de différenciation défailant mènera à une dévalorisation des diplômes.

Il s'en suit que le rythme croissant des détenteurs de diplômes n'arrête pas de croître, toutefois pas au même rythme que celui de l'offre d'emploi. Celui-ci a tendance à baisser particulièrement ces dernières années, pour des raisons multiples dont certaines sont citées précédemment dans cette introduction générale. Il en découle ce que certains auteurs qualifient de la "surenchère" des diplômes, expliquée par l'augmentation du nombre d'individus scolarisés et par l'existence de travailleurs diplômés sur un marché de l'emploi de plus en plus rétréci. Y a-t-il, donc, toujours un lien entre le diplôme, le type d'emploi et le salaire ?

Il est alors nécessaire d'agir sur la transition de l'école à l'emploi afin que le groupe des "jeunes débutants en mal d'insertion" accède rapidement à des emplois offrant de meilleures perspectives de carrière. Ceci doit passer impérativement par l'adaptation de l'éducation aux besoins du marché de travail mais aussi par le développement du rôle des établissements scolaires comme intermédiaires de recrutement.

Dans ce sens, la France a mis en place en avril 2009 un plan d'urgence pour l'emploi des jeunes annoncé visant un ensemble d'actions dans le but de favoriser l'apprentissage et d'offrir la possibilité de cumuler études et travail. Ce plan d'urgence concerne aussi la mise en place d'un ensemble de mesures afin de soutenir l'emploi des jeunes défavorisés dans le pays<sup>3</sup>. C'est ainsi que la professionnalisation de l'éducation (système dual) a permis à

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3. Réunion de l'OCDE au niveau ministériel sur l'emploi et le travail "OCDE (2009), "Faire face à la crise de l'emploi Les réponses des politiques sociales et de l'emploi" sous le "thème 3 : Aider les jeunes à s'insérer durablement sur le marché du travail". Paris, 28-29 septembre 2009.

plusieurs jeunes d'approcher le marché du travail avant même d'obtenir un diplôme. Le développement du rôle des réseaux d'anciens diplômés (ou réseaux alumni) ainsi que le rapprochement entre entreprises partenaires et établissements de formation a aussi permis une meilleure transition de l'école à l'emploi. Le phénomène des réseaux d'anciens (ou réseaux alumni) est encore largement ignoré par la littérature scientifique (Menger et al., 2015).

Ces réseaux d'alumni sont en général plus développés dans les Grandes Ecoles de Commerce, de Management ou d'Ingénieurs. Au sein de ces organismes, l'acquisition de capital social et celle de capital humain sont d'autant mieux assorties que les candidats ont été préalablement formés puis soigneusement distribués dans la hiérarchie des écoles. L'internationalisation du marché des formations à la gestion, au management, etc., avec sa structuration des alliances entre les établissements par classe de qualité, élargit le rendement du capital social procuré par les études.

Le capital social des écoles est géré et exploité dans les réseaux d'interaction entretenus entre les diplômés d'une cohorte, et entre les diplômés de l'école, via la conversion des diplômés en alumni.<sup>4</sup> Un diplômé est d'autant plus aisément converti en un contributeur et un dépositaire actif de la marque de son école que ses décisions incorporent les effets des réseaux d'interaction qui ont été créés pendant ses études, et qui ont pu être maintenus au-delà. Le jeu est à trois partenaires : le diplômé, la communauté organisée des diplômés et l'école. Sans la mise en circulation d'une monnaie d'échange, le capital social, le jeu ne fonctionne pas. Et sans conversion du capital social en capital contributif (en investissement dans son capital), l'école n'est pas en mesure d'entretenir l'accumulation et la redistribution

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4. Selon l'enquête réalisée par Moingeon (2003) ; voir aussi Moingeon, Lehmann-Ortega (2007) : sur le marché français de la formation continue des managers et des cadres dirigeants d'entreprise, 20 à 25 % de ce marché sont détenus par les établissements supérieurs de gestion et, parmi eux, les trois grandes écoles de gestion franciliennes réalisent 60 % du chiffre d'affaires cumulé. Selon les données citées par la Cour des comptes en 2013 (op. cit., p. 317), la formation continue représente 24 % du chiffre d'affaires de HEC et 34 % de celui de l'ESSEC, contre moins de 3 % en moyenne dans le budget des autres écoles.

du capital social entre toutes les parties prenantes (Menger et al., 2015).

## Emergence des nouvelles formes d'emploi

Dans le cadre de ce travail doctoral, le deuxième chapitre s'intéresse à la qualité des emplois que les jeunes obtiennent. Afin d'examiner cela, une distinction est faite entre les attributs objectifs et subjectifs qui résultent de chaque emploi. Par les attributs objectifs, nous entendons le type de contrat, le salaire et l'ancienneté dans l'emploi actuel. Quant aux attributs subjectifs, il s'agit de la satisfaction éprouvée par les travailleurs vis à vis de leur emploi.

Ainsi, cette thèse considère (précisément dans le troisième chapitre) le contrat comme une mesure objective de la qualité de l'emploi obtenu. Il existe 3 grands types de contrats : Le contrat CDI (à durée indéterminée), CDD (à durée déterminée) et le contrat temporaire (intérimaire, saisonnier, apprentissage, etc.). L'objectif de l'étude du type de contrat est d'expliquer la probabilité pour un jeune travailleur de se retrouver dans le cadre d'un emploi permanent (CDI) et donc sécurisé.

Un emploi permanent et stable est objectivement défini comme un contrat assurant une certaine sécurité financière et professionnelle. Le Code du Travail réserve aux seuls CDI les embauches destinées aux emplois stables et permanents dans l'entreprise. Le Code du Travail prévoit qu'un contrat à durée déterminée ne peut pas pourvoir durablement un emploi lié à l'activité normale et permanente de l'entreprise. Le contrat CDD est réservé aux seules situations dans lesquelles l'entreprise doit faire face à un besoin ponctuel de main d'oeuvre supplémentaire pour réaliser une tâche précise et temporaire. Dès qu'un poste correspondant à un emploi stable et durable lié au fonctionnement habituel de l'entreprise se crée ou se libère, il doit être pourvu par une embauche faite par CDI.

C'est ainsi que le contrat de travail à durée indéterminée (CDI) est associé à la forme normale et générale de la relation de travail<sup>5</sup>. Différemment, un contrat à durée déterminée

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5. Source : [travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-](http://travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-)

est conclu pour une durée limitée et précisée, au départ, dans le contrat. Il prend fin soit à la date fixée, soit - en l'absence de terme précis - lorsque se réalise l'objet pour lequel il a été conclu (retour du salarié remplacé, fin de la saison, etc.)<sup>6</sup>.

Dans le cas des emplois temporaires par exemple, il s'avère que les actifs récents sont plus susceptibles d'être recrutés dans le cadre de ce type de contrat de travail comparés aux actifs anciens. Guggemos and Vidalenc (2015) publient dans un rapport de l'Insee que les salariés de moins de 25 ans, entrés plus récemment sur le marché du travail, occupent moins souvent des emplois en CDI (46% d'entre eux) plutôt qu'en CDD. Selon la même source, les embauches par le biais d'un CDI en 2014 représentent 86.4% des emplois en France, 9,7% sont en CDD, 2,4 % en intérim et 1,6 % en apprentissage. Les femmes occupent trois emplois en CDD sur cinq, mais elles sont deux fois moins nombreuses que les hommes parmi les intérimaires et les apprentis (Insee, enquête Emploi 2014).

Ainsi, ces nouvelles formes ont de plus en plus tendance à rendre "caduque" la norme (CDI), du moins dans certains secteurs, et sont donc en voie de faire, à terme, norme sur des segments entiers du marché du travail. Ce constat se justifie par les pratiques de recrutement de certaines entreprises ou secteurs favorables à ce type de contrat. Toutefois, dans certains cas, ces contrats particuliers peuvent donner lieu à des contrats CDI. Dans ce cas le recours à ces emplois atypiques peut être considéré comme un tremplin vers des emplois permanents (CDI). Cancé and Fréchou (2003) soulignent que seulement un

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contrats/article/le-contrat-de-travail-a-duree-indeterminee-cdi. Consulté le 17/05/2016.

6. Le contrat de travail à durée déterminée est renouvelable deux fois pour une durée déterminée (la possibilité de renouveler les CDD deux fois, au lieu d'une seule précédemment, résulte de la loi du 17 août 2015. L'article 55 de la Loi numéro 2015-994 du 17 août 2015 relative au dialogue social et à l'emploi est venu modifier le régime du renouvellement du contrat de travail à durée déterminée, défini par l'unique article L.1243-13 du code du travail. Il s'applique également aux contrats en cours à la date d'entrée en vigueur de cette loi. Les conditions de renouvellement sont stipulées dans le contrat ou font l'objet d'un avenant soumis au salarié avant le terme initialement prévu. Source : [travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-a-duree-determinee-cdd](http://travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-a-duree-determinee-cdd). Consulté le 17/05/2016.

quart des intérimaires et un tiers des salariés en CDD en 2001 ont muté vers un CDI un an plus tard. L'offre d'emploi est conditionnée, entre autres, par les qualités et attitudes dont fait preuve le candidat à l'embauche comme la motivation, le degré de leadership et l'implication. Il s'agit des critères inobservables et intrinsèques qui viennent s'ajouter à la valorisation des acquis scolaires et des diplômes.

En conclusion, pour la plus part des cas, "une norme" en matière de contrat de travail est le CDI à temps plein avec employeur et lieu de travail uniques. Le travail "atypique," "non-standard" ou temporaire (Le contrat à durée déterminée (CDD), le travail intérimaire, les emplois d'avenir, les contrats aidés, l'alternance et l'apprentissage, le travail à temps partiel, le télétravail, etc.) est défini par rapport à cette désignation comme une exception. Cette distinction justifie parfaitement la raison pour laquelle nous considérons que le contrat est un indicateur de la sécurité et de la qualité de l'emploi. L'analyse de cet indicateur dans le deuxième chapitre nous permettra d'apporter des conclusions quant aux facteurs qui influencent la probabilité de se retrouver plutôt dans un contrat CDI qui est la "norme". Parmi ces facteurs l'impact des intermédiaires de recrutement, qu'ils soient formels ou informels, est mis en évidence.

## **Canaux formels et informels de recherche d'emploi**

Rappelons qu'en plus des méthodes traditionnelles de recherche d'emploi (intermédiaires institutionnels publics et privés, annonces, concours), il existe aussi d'autres méthodes alternatives telles que les réseaux personnels, professionnels et scolaires (et réseaux sociaux virtuels sur Internet) mais aussi les candidatures spontanées, appelées aussi méthodes informelles. Celles-ci semblent être plus populaires au cours d'une période de récession, caractérisée par des taux de chômage élevés (Kramarz and Skans, 2014). Les demandeurs d'emploi peuvent préférer ces canaux informels, non seulement pour leurs faibles coûts, mais aussi car ils permettent de réduire, du côté des employeurs, les caractéristiques non observées de la productivité des candidats, et du côté des travailleurs, les

caractéristiques non observées de l'emploi trouvé.

Les travaux aussi bien théoriques qu'empiriques consentent souvent que le mode "réseaux de contacts personnels" fonctionne mieux en matière de transmission d'informations que les méthodes formelles déjà décrites (Mortensen, 1987, Devine and Kiefer, 1993). Différemment, Bortnick and Ports (1992) constatent que la plus forte probabilité de trouver un emploi est remarquée chez ceux qui mobilisent les agences privées même si les demandeurs d'emploi utilisent très souvent des candidatures spontanées. Addison and Portugal (2002) montrent que les services publics d'emploi apparaissent moins efficaces en générant des salaires plus bas et des contrats plus courts.

Cependant, Osberg (1993) montre que les canaux de recherche d'emploi changent avec le cycle économique et souligne un problème de sélection dans le choix des stratégies de recherche d'emploi (principalement pour ceux qui utilisent les organismes publics de l'emploi). Dans ce même sens, Fougère et al. (1998) considèrent le rôle du service national de l'emploi en France ("Pôle d'Emploi") sur le taux de sortie du chômage. Ces deux études soulignent un impact significatif des intermédiaires de recrutement sur la probabilité de trouver un emploi en considérant un seul type de méthodes formelles : les intermédiaires institutionnels (publiques ou privées) en concurrence avec les procédures "marchandes" (candidatures spontanées et annonces).

D'autres auteurs montrent que la combinaison de plusieurs procédures de recherche d'emploi permet non seulement de créer des disparités en termes de qualité et de quantité d'information, mais elle affecte aussi le coût de la recherche et le processus de génération des offres d'emploi (Autor, 2001, Freeman, 2002, Fountain, 2005). Sabatier (2002), inspirée par Barron and Mellow (1979), propose un modèle structurel de recherche d'emploi en fonction des méthodes de recherche utilisées et où l'intensité de la recherche d'emploi est endogène. L'approche de l'auteur consiste à introduire les canaux de recherche grâce à une fonction de production de l'information afin de montrer que ces derniers affectent à la fois le taux d'arrivée des offres mais aussi les coûts de recherche. Sabatier (2002) souligne que les méthodes de recherche d'emploi ont un effet discriminatoire sur la durée du chômage.

Holzer (1988), étudie un modèle de recherche d'emploi où il fait valoir que le choix de la stratégie de recherche dépend de son coût relatif et de sa rentabilité espérée (en termes d'attributs monétaires et non monétaires des offres d'emploi qui lui sont associées). Dans le même sens, Bachmann and Baumgarten (2013) concluent que, plutôt que son faible coût, ce sont bien les avantages attendus du mode informel qui expliqueraient son utilisation. C'est pourquoi la majorité des données empiriques montrent que les méthodes de recherche les plus fréquemment utilisées (réseaux personnels et candidatures spontanées), sont aussi les plus productives, car elles permettent plus que d'autres l'accès à l'emploi.

Ainsi, l'étude de la relation qui puisse exister entre la méthode d'accès à l'emploi utilisée et les caractéristiques du travail obtenu semble nécessaire afin de comprendre dans quelles mesures ces méthodes formelles ou informelles peuvent influencer différemment et de manière significative la qualité d'emploi. Par ailleurs, nous notons que peu d'études prennent en compte l'impact de la dernière récession dans la recherche d'emploi. Cette thèse explore alors ce point, dans les deux derniers chapitres, puisque nous tenons compte de l'année d'entrée à l'emploi (avant ou après l'année 2008) afin d'analyser l'impact de la récession sur la façon dont les employeurs et les employés sont appariés sur le marché du travail.

En effet, la réussite de la recherche d'emploi ne dépend pas seulement de la capacité à trouver un travail, mais elle peut être aussi affectée par d'autres facteurs externes. Par exemple, si le marché du travail est saturé ou si l'individu réside loin d'un bassin d'emploi, ceci peut limiter ses approches et son effort de recherche d'emploi. Généralement, le comportement des chercheurs d'emploi est modélisé par l'effort de ces derniers durant la période de prospection. Le dernier chapitre de la thèse (Chapitre 4) propose d'utiliser le nombre des méthodes de prospection utilisées comme mesure de l'intensité de la recherche d'emploi, ce que très peu d'études ont exploré. En utilisant cette approche, Sabatier (2002) montre que le taux d'arrivée des offres d'emploi dépend positivement de l'intensité de l'effort de recherche ainsi que de la combinaison de plusieurs méthodes de recherche d'emploi.

Ainsi, l'étude des caractéristiques qui influencent directement l'intensité de la recherche

d'emploi devrait fournir plus d'information sur la façon dont les jeunes demandeurs d'emploi (qu'ils soient chômeurs ou en emploi) tentent de quitter ce statut. Le choix de l'intensité de recherche d'emploi n'est autre que le résultat d'une procédure dépendante des caractéristiques individuelles, socio-démographiques, mais aussi du statut du demandeur d'emploi sur le marché du travail.

Cependant, ce seul paramètre ne suffit pas pour caractériser le comportement de recherche d'emploi. Il est également important d'étudier le choix de la stratégie d'emploi et d'examiner les préférences, à la fois des chômeurs mais aussi des demandeurs d'emploi qui en possèdent déjà un. Cette distinction est nécessaire dans la mesure où il est important de discuter l'hypothèse selon laquelle ces deux types de demandeurs d'emploi se retrouvent en directe concurrence sur le marché du travail. Ceci figure d'ailleurs parmi les axes de recherche de cette thèse. Le chapitre 4 discute, entre autres, cette hypothèse, et fournit des réponses.

## **Recherche d'emploi des chômeurs et des employés**

Les demandeurs d'emploi sont par définition "des individus qui s'inscrivent à Pôle Emploi. Ces demandeurs sont enregistrés à Pôle Emploi dans différentes catégories de demandes d'emploi en fonction de leur disponibilité, du type de contrat recherché et de la quotité de temps de travail souhaité<sup>7</sup>".

Ces individus peuvent donc être des chômeurs à la recherche d'emploi ou bien des personnes en emploi mais qui en recherchent un autre. Les difficultés d'insertion pour les premiers sont déjà abordées précédemment dans cette introduction. Nous retenons en particulier les problèmes liés à la transition de l'école à l'emploi et le déclassement des diplômés à l'embauche. S'ajoutant à cela, le manque d'expérience professionnelle chez les jeunes ainsi que la pénurie d'offres d'emploi suite à la dernière récession économique. Il en découle que les chômeurs, en particulier, ont du mal à s'insérer sur le marché, mais

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7. Source : Insee. Voir en annexe B.2 les détails par catégorie de demandeur d'emploi (5 catégories).



aussi à chercher de manière efficace. Ils se retrouvent donc à choisir entre passer par des structures d'accompagnement aussi bien publiques que privées. Ces structures sont souvent associées à la lenteur de leurs démarches, le manque de diversité dans le public accompagné ainsi que dans les offres d'emploi proposées. Ils peuvent être aussi confrontés à accepter des emplois non qualifiés, inadaptés à leurs formations ou à accepter des contrats atypiques (temporaires). Par ailleurs, ils peuvent choisir de s'engager dans un processus de recherche d'emploi dans l'espoir de décrocher un emploi qui puisse maximiser leur utilité en matière d'attributs monétaires et non monétaires.

Parallèlement, certains individus pourvus d'emploi peuvent également recommencer à chercher un nouveau travail. Les raisons qui peuvent pousser ces travailleurs à chercher un emploi s'expliquent principalement par l'inadéquation entre leur emploi actuel et leurs qualifications. Cette non-concordance est principalement le résultat d'une insatisfaction par rapport aux attributs monétaires (salaire) et/ou non monétaires (sécurité de l'emploi, conditions et rythmes de travail, manque de perspectives de carrière dans l'emploi actuel, etc.). Ces demandeurs d'emploi constituent donc un groupe bien spécifique du fait de leur statut, quelquefois plus confortable que celui des chômeurs.

Cette distinction des demandeurs d'emploi selon leur statut sur le marché du travail a déjà fait l'objet de quelques études théoriques et empiriques qui se sont développées à partir des années 90. Deux lignées de recherche se sont principalement distinguées. La première soutient la prémisse que les chômeurs et les personnes pourvues d'emploi ne sont pas si différents en ce qui concerne leurs pratiques de recherche d'emploi, formant un groupe homogène de demandeurs d'emploi. Parmi les principaux auteurs de ce courant, nous pouvons citer Van den Berg and Ridder (1998), Burdett and Mortensen (1998), Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007). Ces auteurs concluent que les deux types de demandeurs d'emploi se retrouvent donc en concurrence directe sur le marché du travail. Par conséquent, pour les chômeurs, la présence des personnes qui sont en emploi et qui en recherchent un autre, constitue une contrainte supplémentaire qui réduit leurs chances de trouver un emploi (Eriksson and Gottfries (2005),

Rogerson et al. (2005), Eriksson and Lagerström (2006)).

La deuxième lignée de travaux souligne l'hypothèse selon laquelle ces deux types de travailleurs sont en directe concurrence sur le marché de travail est particulièrement discutable (Longhi and Taylor, 2014). Si ces deux types de demandeurs d'emploi sont en réalité en concurrence pour les mêmes postes, cela suppose que leurs caractéristiques soient identiques et que leurs préférences soient similaires. Or, les études récentes montrent que ceci n'est pas le cas puisque les personnes pourvues d'emploi et les chômeurs s'avèrent n'avoir ni les mêmes priorités, ni les mêmes préférences. Des auteurs, à l'instar de Weber and Mahringer (2008) ; Lindeboom et al. (1997) ; Gorter et al. (1993), montrent que les demandeurs d'emploi, selon qu'ils soient chômeurs ou pourvus d'emploi, mobilisent des modes de recherches différents avec des différentes probabilités de succès. Dans ce sens, nous pouvons réfléchir à l'effet négatif de la dépendance à la durée du chômage sur la probabilité de trouver un emploi mais aussi sur les salaires de réserves. Par ailleurs, la présence de disparités parmi ces demandeurs d'emploi en termes de préférences pour les emplois recherchés rendent les conclusions plutôt mitigées.

Il apparaît donc que la concurrence sur le marché du travail entre demandeurs d'emploi au chômage et ceux en emploi n'est pas suffisamment explorée surtout en ce qui concerne les jeunes demandeurs d'emploi, en particulier en France. Il convient donc de bien comprendre l'étape de recherche d'emploi de part ses enjeux économiques, sociaux mais aussi politiques. Pour le cas de la France, il s'agirait même d'une priorité qui ne cesse de préoccuper les débats politiques afin de mettre en place les mesures appropriées pour l'emploi des jeunes. Il devient donc évident de se focaliser sur la question des disparités entre demandeurs d'emploi selon leur statut sur le marché du travail (en termes de stratégies d'intensité de recherche). Afin d'examiner cela, le dernier chapitre de la thèse étudie cette problématique dans le but d'apporter des réponses claires à ce sujet.

## Plan de thèse

Depuis les travaux initiés par Granovetter (1995) et Rees (1966), on sait que les mises en relation entre les employeurs et les salariés se font par des relations, des dispositifs formels ou par des démarches spontanées. Toutefois, peu de recherches distinguent entre le rôle joué par le réseau formé par les contacts personnels (famille, amis, etc.) et celui que joue le réseau formé à l'école. La littérature a accordé très peu d'attention aux connexions qui peuvent exister entre les diplômés et leurs établissements scolaires. Dans un contexte de professionnalisation de l'éducation et de politique de renforcement du rôle de l'école, le rôle de ces établissements de formation dans l'accès à l'emploi devrait être étudié.

Plus précisément, notre analyse s'organise de la manière suivante : le deuxième chapitre s'intéresse aux modalités d'accès à l'emploi chez les jeunes à travers l'analyse des déterminants de la probabilité d'accès à l'emploi grâce à un mode en particulier. Une comparaison est faite selon le type du mode d'accès utilisé (formel ou informel). Dans le troisième chapitre, un ensemble de mesures d'efficacité de ces différentes méthodes sont proposées et étudiées afin de distinguer le rôle des différents canaux de recherche dans la qualité d'appariement employeur-employé. Enfin, le quatrième chapitre met l'accent sur la stratégie et l'intensité de la recherche d'emploi chez les jeunes qui sont à la recherche d'emploi. Ce dernier chapitre fournit une comparaison entre deux types de demandeurs d'emploi : les chômeurs ainsi que les personnes en emploi à la recherche d'un nouveau travail. L'objectif est d'étudier l'hypothèse selon laquelle ces deux travailleurs mobilisent des pratiques de recherche d'emploi similaires et se retrouvent donc en concurrence directe sur le marché de l'emploi.

### Chapitre 2 : The Determinants of the Youth Job Access Channel in France

Une fois diplômés, les jeunes commencent à chercher un travail et cette période de prospection conditionne leur accès à l'emploi. Cette étape nécessite la récolte d'un maximum d'information sur les offres d'emploi ainsi que sur les exigences du marché, l'objectif des

demandeurs d'emploi étant de trouver l'offre qui maximise leur utilité en termes de salaire mais aussi en termes d'adéquation par rapport à leurs qualifications. Afin d'atteindre cet objectif, le recours aux intermédiaires institutionnels est très souvent indispensable. Toutefois, dans un contexte d'asymétrie d'information où l'accès à l'information est très coûteux, le candidat peut privilégier le mode informel, à savoir ses propres contacts personnels ou professionnels lors de sa recherche d'emploi. Les réseaux sociaux jouent alors le rôle d'un dispositif d'information supplémentaire sur le marché du travail, comme l'a souligné Rees (1966), et peut être ainsi un moyen efficace de trouver un emploi (voir Pellizzari (2010) et Zenou (2015)).

Une question moins explorée est de savoir si ce mode a la même importance pour des types très différents de demandeurs d'emploi, en particulier une fois que la distinction est faite entre différentes formes de réseaux. Notre analyse distingue entre les réseaux de contacts personnels ou professionnels d'une part, et les réseaux formés à l'école d'autre part. La raison pour laquelle nous considérons deux types de réseaux sociaux est que l'effet de certaines variables, tel que le niveau d'éducation, peut être dilué après le regroupement de ces deux types de réseaux de contacts. Ainsi, nous proposons une étude distincte de ces deux réseaux du fait qu'ils puissent être utilisés différemment en fonction des caractéristiques individuelles (âge, genre, origine, l'éducation) et de l'emplacement géographique du lieu de résidence.

En utilisant des données de l'enquête Emploi (Insee, 2010), ce deuxième chapitre se concentre sur les déterminants de la probabilité d'obtenir un emploi à travers un mode de recherche donné (formel ou informel). Autre que l'effet du niveau d'éducation, ce deuxième chapitre s'intéresse aussi à l'impact de la zone de résidence sur les modes de recherche d'emploi, à savoir si l'individu vit dans une zone rurale ou dans une zone urbaine. En France, certaines zones urbaines sont classées comme Zones Urbaines Sensibles<sup>8</sup>. Au-delà

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8. Les Zones Urbaines Sensibles ou ZUS, sont des territoires urbains ou infra-urbains définis par les autorités comme des cibles prioritaires de la politique urbaine en fonction de facteurs locaux liés aux difficultés que les habitants de ces territoires connaissent (Source : "Insee - Définitions et méthodes- Zone

de Bayer et al. (2008) concernant l'effet du quartier sur l'obtention d'un emploi, nous évaluons les effets socio-spaciaux *i.e.*, en tenant compte du degré de la ruralité et de la sensibilité de leur région de résidence sur le mode d'accès à l'emploi. Par ailleurs, l'impact de l'origine est aussi souligné en considérant 4 types d'origine (en fonction de celle des parents).

Etant donnée la caractéristique qualitative et polytomique de notre variable dépendante (le mode d'accès) ainsi que les caractéristiques de notre échantillon (formé de jeunes actifs en emploi ou chômeurs), notre approche économétrique consiste à estimer un modèle multinomial avec sélection, similaire à Van De Ven and Van Pragg (1981). En effet, notre analyse étant axée sur les jeunes en emploi mais compte tenu de la présence des chômeurs dans l'échantillon, la prise en compte du problème de sélection s'avère nécessaire.

Notre analyse empirique montre que plus de 30 % des jeunes travailleurs accèdent à leur emploi grâce à leur réseau social et à leurs établissements scolaires. Par ailleurs, les réseaux scolaires paraissent plus utiles aux jeunes ayant des diplômes élevés, alors que les réseaux sociaux sont plus fructueux pour les très peu diplômés. Par ailleurs, nous montrons que le fait d'être une femme ou d'avoir des parents non-français réduit significativement la probabilité de trouver un emploi par le biais des réseaux sociaux ou scolaires. Enfin, les personnes vivant dans des Zones Urbaines Sensibles sont plus touchées par le chômage, et ont tendance à trouver un emploi soit par leurs réseaux scolaires soit par les agences publiques d'emploi. Ainsi, les réseaux en général aident les jeunes à trouver un emploi, mais de manière différente en fonction de leur niveau d'éducation, de leur origine, genre ou lieu de résidence.

Ce deuxième chapitre s'organise comme suit. La section 2 présente les données et certains faits stylisés. Le modèle économétrique est introduit dans la section 3. La section 4 présente les résultats. Enfin, la section 5 conclut.

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urbaine sensible")

### Chapitre 3 : Young workers-job matching quality : Evidence from France

Selon Granovetter (1995), la probabilité de réaliser de bonnes performances sur le marché du travail dépend des choix des méthodes de recherche du côté du demandeur d'emploi et des choix des canaux de recrutement du côté de l'employeur. Le chapitre précédent aborde d'une manière très détaillée les déterminants de la probabilité d'accéder à un emploi grâce aux différents modes d'accès disponibles sur le marché. Une fois l'emploi est obtenu, se pose alors la question de la qualité et de la satisfaction des travailleurs. Dans une logique de continuité, ce chapitre analyse le rôle de ces canaux de recherche sur la qualité de l'appariement jeunes travailleurs-emploi. Afin de décrire cette qualité, un ensemble d'indicateurs objectifs et subjectifs sont proposés.

Il existe une large littérature empirique qui s'est concentrée sur l'estimation des effets des modes d'accès à l'emploi sur le salaire. Toutefois, on en connaît très peu sur les effets de ces méthodes en termes d'attributs monétaires et non monétaires des emplois qu'ils fournissent. Les attributs monétaires concernent les revenus reçus, tandis que les attributs non-monétaires concernent le contrat, l'ancienneté dans l'emploi mais surtout le niveau de satisfaction vis à vis de certaines caractéristiques du travail obtenu (la sécurité de l'emploi, l'adéquation avec ses qualifications, les conditions de travail, le rythme horaire..).

Dès lors, ce chapitre examine ce "sujet important sur lequel nous savons très peu" (Granovetter, 1995). Principalement, dans le cadre de cette analyse, nous essayons de répondre aux questions suivantes : Quels facteurs influencent la probabilité d'être insatisfait au travail ? Quand est-ce que les canaux formels et informels ont un avantage par rapport aux attributs monétaires et non monétaires ? Ainsi, dans quelle mesure ces deux mécanismes (formels et informels) affectent différemment la qualité de emploi ?

En particulier, il s'agit de savoir si l'hypothèse souvent défendue concernant l'effet positif des réseaux personnels sur la probabilité de trouver des emplois qui perdurent, reste valable si l'on distingue entre réseaux sociaux et réseaux scolaires et si nous concentrons notre attention sur l'emploi des jeunes.

Pourquoi ces questions sont-elles importantes ? Quand on sait à la lumière des chiffres cités précédemment que parmi les jeunes qui réussissent à s'insérer, une part importante se retrouve confrontée à des emplois précaires, alors la qualité de l'emploi des jeunes doit être étudiée. Dans ce sens, le chapitre précédent montre que l'accès à l'emploi est très difficile pour la plus part des jeunes très peu diplômés. Toutefois, plus le niveau d'éducation est élevé plus cette probabilité augmente. Les résultats précédents montrent aussi des disparités en matière d'accès à l'emploi selon que le candidat est homme ou femme, Français ou pas, etc. Il apparait aussi que les modes informels (réseaux et candidatures spontanées) sont les plus performants en matière d'accès à l'emploi.

Il serait donc intéressant de comprendre comment ces mêmes canaux qui ont permis l'accès à l'emploi affectent les différents attributs de l'emploi. Etudier l'efficacité des modes de recherche dans l'allocation des ressources humaines est un élément clé pour l'évaluation et la conception de politiques axées sur le marché du travail des jeunes. Parmi ces politiques, beaucoup visent à offrir des possibilités de travail temporaires (et souvent subventionnés). Ces politiques visent l'insertion des jeunes de telle sorte que l'objectif le plus important soit le travail en soi. Or, il existe aussi des facteurs intrinsèques à prendre en compte. Dans ce sens, il est vrai que les compétences se développent et s'améliorent grâce aux expériences professionnelles. Ainsi, le succès de ces politiques dépend de leur capacité à équilibrer insertion professionnelles et qualité de l'emploi.

Trouver un emploi est une réussite en soi, en particulier dans un contexte de récession économique et de taux de chômage élevés. Toutefois, la question de la qualité de l'appariement jeunes travailleurs-emploi doit clairement être mise en évidence. Par ailleurs, l'accent mis sur la qualité de l'emploi a également été dicté par le constat selon lequel l'amélioration de la qualité de l'emploi a des effets positifs sur la croissance et la productivité (European Commission (2003), p. 6-8). Dans le même sens, elle contribue également à l'amélioration du bien-être mental et psychique des employés, servant ainsi comme une condition préalable pour permettre aux travailleurs d'être plus productifs et plus satisfaits dans leur emploi (Eurofound (2001), p. 7).

Ce chapitre s'organise comme suit. Section 2 se focalise sur les principales contributions théoriques et empiriques autour des effets des méthodes de recherche sur la qualité de l'emploi qu'ils génèrent. La section 3 décrit les données et l'ensemble des variables utilisées dans la spécification économétrique. Section 4 introduit l'approche économétrique utilisée. Section 5 résume les principaux résultats et discute de les implications en termes de recherche future. Enfin, la dernière section conclut.

#### **Chapitre 4 :Who Uses What ? Employed and Unemployed Job Search Strategies : Evidence from France**

Les études portant sur le processus de recherche d'emploi dans une perspective sociologique supposent que les individus peuvent influencer leurs probabilités d'obtenir un emploi en menant des activités de recherche fréquentes. Dans cette perspective, on évoque "l'intensité" de la recherche d'emploi. Généralement, le comportement des chercheurs d'emploi est modélisé par l'effort de ces derniers durant la période de prospection. Il existe différentes méthodes pour mesurer l'intensité de recherche d'emploi. Certains auteurs considèrent comme indicateurs le temps consacré à la recherche ou le nombre de contacts par période (Krueger and Mueller, 2008). D'autres s'intéressent au nombre de méthodes de recherche utilisées (Devine and Kiefer, 1993). Toutefois, l'absence d'une définition empirique formelle de cette mesure est une limite à l'utilisation de l'intensité comme indicateur dans l'étude du processus de recherche d'emploi.

Ainsi, ce dernier chapitre propose d'utiliser le nombre des méthodes de prospection utilisées comme mesure de l'intensité de la recherche d'emploi. Très peu d'études considèrent cette variable comme mesure de l'intensité. Sabatier (2002) considère le nombre de méthodes mobilisées comme indicateur de l'effort de recherche. L'auteur montre que le taux d'arrivée des offres d'emploi dépend positivement de l'intensité de cet effort, mais aussi de la combinaison de plusieurs méthodes de recherche d'emploi.

Néanmoins, Bortnick and Ports (1992) montrent que le nombre de méthodes utilisées



par les demandeurs d'emploi semble avoir relativement peu d'effet sur la probabilité de trouver un emploi. Ces auteurs constatent que c'est plutôt le choix des méthodes de recherche d'emploi qui importe, plus que leur quantité. Ainsi par exemple, Blau and Robins (1990) soulignent qu'aux états-Unis, les réseaux sociaux forment le mode de recherche le plus efficace pour les demandeurs d'emploi. Bortnick and Ports (1992), à leur tour, soulignent que l'utilisation des agences publiques de recherche d'emploi (seules ou avec une autre méthode) offre les probabilités les plus faibles d'être employé à la période suivante.

Le choix de l'intensité de recherche d'emploi, n'est autre que le résultat d'une procédure dépendante des caractéristiques individuelles, socio-démographiques, mais aussi du statut du demandeur d'emploi sur le marché du travail. Ainsi, l'étude des caractéristiques qui influencent directement l'intensité de la recherche d'emploi devrait fournir plus d'informations sur les stratégies choisies par les jeunes demandeurs d'emploi (qu'ils soient chômeurs ou en emploi). Cependant, ce seul paramètre ne suffit pas à caractériser le comportement de recherche d'emploi. Il est donc important d'étudier aussi le choix de la stratégie d'emploi et d'examiner les préférences à la fois des chômeurs, mais aussi des demandeurs en emploi. Cette distinction est nécessaire dans la mesure où il est important de discuter l'hypothèse selon laquelle ces deux types de demandeurs d'emploi se retrouvent en directe concurrence sur le marché du travail.

Pour conclure, l'analyse de l'intensité de la recherche d'emploi montre que les effets tournent autour de deux résultats majeurs. Premièrement, nous distinguons les demandeurs d'emploi qui ciblent leur intensité de recherche en se concentrant sur des canaux spécifiques et en mobilisant au plus le troisième niveau d'intensité (4 canaux au plus). Parmi ceux qui choisissent cette stratégie, nous retrouvons les chômeurs, les plus jeunes ainsi que les moins diplômés et les femmes vivant en couple et avec des enfants à leur charge. Cette catégorie a plus tendance à inclure les chercheurs d'emploi de longue durée et ceux qui vivent dans des zones rurales. Deuxièmement, il y a ceux qui choisissent une stratégie de recherche d'emploi plus intense en diversifiant les canaux utilisés. Ce groupe comporte les personnes en emploi, les moins jeunes et les plus diplômés. Ces derniers ont

besoin de rentabiliser leur investissement en éducation et ont intérêt donc à trouver un emploi rapidement. Pour cela, ils maximisent leur visibilité à la fois sur le marché du placement mais aussi au niveau de leurs réseaux de contacts personnels ou professionnels et choisissent donc l'intensité maximale de recherche d'emploi.

Cette contribution académique constitue une première approche qui étudie l'employabilité des jeunes en France en mettant en évidence l'influence de leurs méthodes de recherche d'emploi, qu'elles soient formelles ou informelles, sur l'accès à l'emploi ainsi que la qualité de ce dernier. Par conséquent, la revue de littérature dans le chapitre qui suit leur est entièrement consacré.

### **Encadré 1 : L'approche de Roodman pour les modèles récurrents mixtes/Conditional Mixed Process**

Parmi les méthodologies économétriques utilisées dans cette thèse, nous faisons appel aux systèmes d'équations simultanées. Notre système d'équations simultanées est récursif. Dans ce cas particulier de système d'équations avec variables dépendantes qualitatives, nous ne pouvons plus utiliser les techniques d'estimation standard (2SLS, 3SLS) puisque notre but est de trouver des probabilités conditionnelles plutôt que des relations linéaires.

Amemiya (1978) a déjà établi certaines propriétés de l'estimateur en deux étapes dans le cas de deux équations avec une variable endogène entrant dans la deuxième équation comme exogène. Greene (2003) a également suggéré cette estimation en deux étapes comme estimateur efficace. Roodman (2011) généralise cette procédure d'estimation en deux étapes pour le cas où un grand nombre de variables endogènes ne sont pas toutes quantitatives. Le modèle doit être alors récursif pour permettre l'estimation.

Le modèle structurel est ainsi estimé par la technique d'estimation développée par Roodman (2011) qui présente un avantage supplémentaire puisqu'elle permet de résoudre des cas inévitables de variables endogènes qualitatives parmi les variables explicatives.

La commande "cmp" a été suggérée par Roodman (2011) sous Stata afin d'estimer les modèles mixtes à processus récursif.

"Mixed Process" signifie que les différentes équations peuvent avoir différents types de variables dépendantes (types de réponse). Les modèles disponibles sont : les modèles classiques de régression linéaire, Tobit, Intervalle Censuré, Probit, Probit Ordonné, le Probit Multinomial, etc.

Il convient également de noter que le CMP est basé sur le maximum de vraisemblance (utilisant une méthode de simulation) et par conséquent il partage tous les avantages associés à l'estimation ML. En outre, l'approche CMP a l'avantage d'être asymptotiquement plus efficace que toutes les autres méthodes d'estimation (Roodman, 2011).



# Related Literature



# 1 Related Literature

## 1.1 Introduction

Once graduated, young individuals start their job search process. Some may choose to combine short-term contracts to acquire some experience and develop a professional network, while others may choose to invest in job search waiting for the "best" job opportunity. A growing literature, both empirical and theoretical, has already emphasized the role of search methods and their effectiveness during the job search period.

The present chapter provides a conceptual background and discusses the main theoretical and empirical studies. This chapter is organized as follows. Section 1.2 gives an overview of the standard works related to job search modelling and implications. Section 1.3 introduces the formal and informal job search channels and summarizes main researches about their impact on labor market outcomes. Section 1.4 focuses on the job seekers search strategies and intensity and explores the main literature about differences between employed and unemployed job search. Finally, section 1.5 concludes.

## 1.2 About Job Search Theory

Job search theory has been subject to large empirical and theoretical contributions and has been extensively studied since pioneer work of Stigler (1961) and McCall (1970), Pis-

sarides (1979) and Mortensen (1987). The primary interest of this theory is the behavior of job seekers who are looking for best job opportunities depending on several characteristics. First literature emphasizes the importance of the reservation wage and search cost in the decision of accepting a job offer (McCall, 1970). The job search theory investigates the effects of this two parameters on the mobility of individuals from unemployment to employment and vice versa.

The job search theory explains that first, the unemployed starts with choosing between employment or unemployment. The unemployed decides to enter the labor market only if the wage offered is higher than the future expected gains. In this case, it is a voluntary unemployment. Then, involuntary unemployment replaces voluntary unemployment and the unemployed wants to find a job. Involuntary unemployment may be due to several reasons : redundancy, discrimination (gender, origin, place of residence), lack of skills, downgrading of the diploma, health problems or family responsibilities, etc.

The job seeker is supposed to look for a job but as the information is imperfect, he/she might be confronted with inappropriate offers before finding a job. Each time the individual receives an offer, he decides to accept it or reject it based on a set of criteria such as, the match between the skills acquired and the job position, the type of contract, the reservation wage, which tends to decline with unemployment duration (Kiefer and Neumann, 1979). These criteria are extremely important in the decision-making process.

Job search process can be costly in terms of time and effort while searching for the right job with a salary that best meets own expectations. The search costs are mainly three : the cost of visit (search channels, preparing CV, cover letters, fees), costs related to time allocated for search and psychological cost related to the situation of being a job seeker. In addition, there is also the opportunity cost due to the loss associated with being unemployed compared to being employed even with low wages. Equally, on the firm's side,



filling a vacancy requires costs in terms of time and financial resources.

A job seeker continues searching if the marginal gain of search is higher than its marginal cost and he accepts an offer if the wage offer at least equals to his reservation wage. A firm continues searching if search costs become equal to the gain of hiring a candidate. Limits to the job search theory concern mainly the fact that the focus on the individual's education level and productivity abilities are not emphasized. Because of asymmetry of information the worker's type is unknown *ex ante*.

Becker (1964) gives a definition of the human capital as a set of individual's productive capacities : knowledge, experience, skills and health. The human capital theory explains that these capacities form an individual stock of knowledge which can be accumulated, ameliorated but also deteriorated. This theory's range is more limited as Becker predicted. It rightly emphasizes the role of education in the economic progress and in wage determination. However, its orientations are questionable and partial. Questionable as all the reasoning is based on the productivity of the labor market insertion (employee's efficiency). Partial because the relationship between education and wage is much more complex than what the theory predicts.

Overall, the Human Capital Theory considers education as a relatively homogenous predictor such that high levels of educational achievements and quality imply higher productivity and earnings. Such consideration of education is questionable because the process of human capital formation differs across individuals. Not only individuals learn differently, but also the "quality" of education is difficult to define as the required investments in education may depend of the geographical location (urban, suburban, rural). It is necessary for policymakers to consider the context dependency of human capital expenditures to provide efficient resources' allocation.

Hence, one limitation of Human Capital Theory is that it gives less evidence about the processes through which education and training are supposed to lead to higher wages. In statistical models, education and training account only for 30 percent of the variance in individual wages, which suggests the theory leaves a significant percentage of wage variability unexplained. A variety of "middle range" theories (such as screening) attempt to explain the other 70 percent of individual wage variability. Many of these "middle range" theories focus on the social and cultural contexts in which employment decisions are made and suggest numerous factors besides productivity (i.e. cultural and social capital) are involved in the relationship between education and higher wages.

Starting from the assumption that there exist additional factors which also explain the individual's access to employment, earnings and career perspectives, this PhD work suggests that social capital, as defined by the set of individual's personal and professional contacts, matter importantly but differently. Other than the formal or institutional methods of searching for a job, this informal method also called "social networks" appear to play an important role in yielding job opportunities. Hence, this thesis assumes that different job search strategies yield to different employment probabilities as well as job outcomes.

Several researches underline the importance of search strategies used by job seekers and study their efficiency in terms of reducing unemployment duration and providing good matches (Mortensen, 1987, Devine and Kiefer, 1993). These studies emphasize the importance of the integration of job search channels in the job search model. Along with the traditional job search channels (the formal ones : institutional intermediaries and m channels), social networks of professional and personal contacts are more often used. The latter appears to be more popular during a recession period characterized by high unemployment rates Granovetter (1995), Kramarz and Skans (2014).

As explained previously, there is a cost related to job search since the job seeker devotes a part of his time to search for an employment while this time could be allocated to another activity especially that the returns to this investment are uncertain and that the gains are variable. However, time and effort dedicated to search vary importantly depending on the search channels used. Holzer (1988) studies a job search model where he argues that the choice of the search strategy depends on its relative cost and expected productivity as well as the monetary and non-monetary attributes of its associated job offers.

Bortnick and Ports (1992) find that, although unemployed job seekers often use direct applications, the highest probability of finding a job is noticed for those who mobilize the private employment agencies. Addison and Portugal (2002), argue that the public employment offices are less efficient and lead to lower wages and shorter contracts. However, Osberg (1993) notices that search channels change with the business cycle and mentions a sample selectivity in the choice of job search strategies (mainly for those who use the public employment agencies).

Kahn and Low (1990) underline that job searching is also looking for additional information if more job search methods are used and combined together. Indeed, the use of a variety and multiple search methods increases the stock of information needed by the job seeker in order to be more aware of the labor market opportunities and requirements. This topic would be the main focus of the fourth chapter of this PhD work. This latter suggests that disparities in job search efficiency may not only be due to differences in terms of job preferences, but also to preferences in terms of search strategies (formal/informal). Job seekers could allocate same search effort, yet may conduct different search strategies.

Other researches argue that the combination of several job search procedures not only lead to some disparities in terms of information on the quality and the quantity of job opportunities, but also affects search cost and the vacancies generating process (see Autor,

2001, Freeman, 2002, Fountain, 2005). Sabatier (2002), underlines that search methods have a discriminating effect on unemployment duration, but also notices different effects of the production of information on the unemployment spells given the job type obtained. However, Bachmann and Baumgarten (2013) conclude that expected benefits from choosing the informal channel (social networks) are more likely to determine the choice of using this specific channel, rather than its low cost.

The empirical evidence shows that the most frequently used search methods (personal contacts and direct applications) are also the most productive as they provide access to jobs. There is a large body of literature indicating that using "word of mouth" or personal contacts, is among the most popular and effective search procedures. Blau and Robins (1990) emphasize that social networks is the most effective channel for job seekers in the U.S.

Since these job search channels can be formal or informal, the literature recognizes some disparities in terms of their respective roles in providing job opportunities. Hence, to what extent job search channels matter in making the job search process successful along with the educational attainment and the search effort? The next section introduces the social networks theory and the role of this informal device on differences in terms of labor market outcomes.

### **1.3 Formal and Informal Search Channels**

The social network theory is the study of how the social structure of relationships around a person, group, or organization affects beliefs or behaviors. Causal pressures are inherent in social structure and the theory applies to a variety of fields and issues.

Since the work initiated by Rees (1966), Granovetter (1973, 1995), we know that the link between employers and employees goes through formal intermediates but more often through personal relationships or social networks. Mortensen (1987) points out that several access channels are available on the labor market and persist even during hard times of economic recession such as the response to an ad, use of the public or private employment services. Yet, a casual conversation with a friend or a family member over a coffee, can also be a surprising way, and frequently approached to find a job (Mortensen, 1987). But, what makes social networks work ?

Both workers and firms may prefer referral hiring, not only for its lower costs, but also as it reduces the unobserved characteristics of the worker's productivity and the job's attributes. The importance of social networks in the labor market has been emphasized by a great number of studies so far. This PhD considers social networks as the set of personal, professional and school contacts forming the "social capital" or the individual's "network". Lin (1999) argues that "the premise behind the notion of social capital is rather simple and straightforward : *Investment in social relations with expected returns*". Individuals engage in interactions and networking in order to produce profits.

The author gives four elements which explain better why social capital can be particularly important. It facilitates the flow of information by providing valuable information about "opportunities and choices otherwise not available". Such information would reduce the transaction cost for the firm to recruit the "best" (in terms of skill or technical or cultural knowledge) worker, and for workers to find the "best" firm which can use their capital and provide appropriate rewards. Hence, an important role could be played by social ties is to exerce some sort of influence in the decision-making process depending on how powerful is the hierarchical position of these ties. In this analysis, we are interested into the social network's influence on the labor market outcomes, that is access to jobs, wages, contract type and satisfaction on the job.

Moreover, social ties resources and their acknowledged relationships could be perceived by the firm as a signal of the individual's social credentials. Thus, being assured and considered as a member of a social group sharing same interests provide emotional support and public acknowledgment of one's claim to certain resources. These factors : information, influence, social credentials, reinforcement, explain why social capital works in several contexts not accounted for by forms of personal capital : economic capital and human capital (Lin, 1999).

Broadly, findings rarely disagree with the fact that social networks are better in transmitting information than formal methods. Nevertheless, Bortnick and Ports (1992) find that, while unemployed job seekers often use direct applications, the highest probability of finding a job is noticed for those who mobilize the private employment agencies. Therefore, Addison and Portugal (2002) argue that the public employment offices are less efficient and lead to lower wages and shorter contracts.

In France, researches in sociology (e.g. Bessy and Marchal (2009) ; Marchal and Rieucan (2010) ; Bessy and de Larquier (2010)) and labor economics (e.g. Fougère et al. (1998) ; Cahuc and Fontaine (2009) ; Sabatier (2010)) studied the role of job search channels involving what Chauvac (2011) calls the "intermediates" to employment. These studies focus mainly on distinguishing and evaluating the role of "recruitment intermediaries," both formal and informal. Mainly, these authors show that these channels are not only limited to a simple mechanism of information transmission, but they can also change the traditional recruitment way and even the labor market, thus, amplifying the inequalities and discrimination since the hiring step.

We believe that studying which characteristics affect directly the job search intensity, should give us more information on how unemployed young job seekers try to quit this status and how on-the-job seekers look for a new job. Thus, the search intensity is the

result of a job seeker's choice depending on his/her individual characteristics. However this parameter alone is not enough to characterize search behaviour. For this reason, the analysis of preferences for the job sought as well as the job search strategies used are suggested in the last chapter of this Phd work.

### 1.3.1 Job Search Channels and Access to Employment

Rees (1966) underlines the role of social networks as informational devices in the labor market. Corcoran et al. (1980), using data from the Panel Study of Income Dynamics on 5,000 American families, argue that almost 50% of all job seekers hear about their current job positions thanks to friends or relatives. This evidence is also conformed by more recent studies. Despite its importance, the hiring process is poorly understood and not enough studied (Petersen et al., 2000). Ioannides and Datcher Loury (2004) show that the use of friends and family can be useful to find a job.

Using French data on young graduates, Margolis and Simonnet (2004) show that more than 50% of young graduates find their first stable jobs through social networks regardless of their educational field (general, technical or vocational). Margolis and Simonnet (2004) argue that graduating from the technical or the vocational education emphasizes network creation and allows building strong links with the labor market (except for the less-educated) for two reasons. The first is that peers play an important role as intermediates, and the second reason joins Rebick (2000) who shows that transition from university education to work is rather characterised by persistent hiring flows between some universities and employers, than through "open market process".

Rebick (2000) argues that this persistence is likely to be linked to the screening process and is also stronger in hiring from faculties with higher percentages of male graduates. The same author concludes that investment in employment ties increases with the ex-

pected tenure of the recruited worker. Looking at the characteristics of networks' users, Elliott (2001) uses U.S. data from the Multi-City Study of Urban Inequality and observes a random sample of adults living in Atlanta, Boston, Detroit, and Los Angeles during 1992-1994. The author shows that not only the less educated workers in poor ghettos of Atlanta, Boston, and Los Angeles, were more likely to use personal contacts, but these contacts were also the main channel through which these individuals found their jobs. The author finds also that insider referrals account for nearly all "ethnic"/immigrant variation in informal job matching.

Using the same data as Elliott (2001), Bentolila et al. (2010) show that those who find a job through their contacts seem to be slightly younger, more likely to be man, less likely to be born in the U.S and white, rather black or Asian and less educated but more experienced and more likely to work in small businesses. Kramarz and Skans (2007), using matched employer-employed data from Sweden, focus on the role of parental networks in terms of income and job access. They show that obtaining the first stable job in the firm where parents work is very common. This effect is particularly strong for the less educated, Northern immigrants and in manufacturing jobs. In addition, the authors underline that the use of informal channels often occurs during high unemployment periods.

Concerning the most educated individuals, Lin (1999) underlines a mitigated evidence. For some jobs with specific requirements (high technology for example), several criteria such as personal skills and the training field may be sufficient to get a job through the formal application. However, for some other particular tasks (high level executives, top managers, etc.), formal criteria such as the diploma are insufficient to reflect personal skills, management quality or ability to handle with difficult situations. In this case, some employers may refer to their personal contacts in order to reduce the risk due to the asymmetry of information on the labor market.



Clearly social networks strongly influence the recruitment process and reinforce inequality and discrimination starting with the hiring process (see Chauvac, 2011, Bessy and Marchal, 2009). Although the literature on formal versus informal job search channels is rich, there is still a lack of empirical evidence on the role played by different kinds of networks (social, professional and school networks). Kramarz and Skans (2014) emphasize the role played by strong ties (family, close friends and relatives) and weak ties (acquaintances). The authors find that strong social ties (parents) strongly influence where young workers find their first job. The effects are larger if the graduate's position is fragile, *i.e.*, low education. Now other than the parental hiring, acquaintances and friends network's role in finding jobs, we believe that the school network is also an additional kind of network which is poorly investigated. In particular, in a context of the professionalization of education through the high investments in vocational and technical education.

Once the importance of these different search devices (formal and informal) is summarized, what about their effectiveness after a recession period? This would be the aim of the third chapter of this PhD work. The last section of this chapter is dedicated to a summary of several research works on the labor market outcomes (job monetary and non-monetary attributes) after access to jobs. In particular several studies broaching the efficiency of social networks in terms of job matching quality are summarized.

### **1.3.2 Job Search channels and Job Match Quality**

In the previous sections of this literature survey, the job search theory, the importance of considering the search channels and the search effort in the job search process, have been underlined. This section is dedicated to a presentation of several researches related to the influence of formal and informal channels on the job matching quality.

Simon and Warner (1992) argue that the education level and the working experience reveal imperfect signals about the real skills of the job applicant. Hence, classic search

channels may convey uncertainty about the overall ability of the job seekers. Employers may choose to rely more on the use of informal channels, namely, social networks in their recruitment process. The likelihood of achieving good matches depends on the choices of search methods from the job seeker side or on the choices of recruitment channels from the employer's side (Granovetter, 1995).

While a large proportion of job seekers got their jobs through friends and relatives, yet, several researches note also that this informal channel may lead to less diversity than desirable in the workplace. Hence, the risk is to end up with hires who are socially and professionally too similar (Petersen et al., 2000).

In terms of monetary outcomes, theoretically, there are two main mechanisms through which social contacts and more broadly referrals are predicted to lead to higher initial wages. First, social contacts and referrals are used by employers as a screening device for the worker's unobserved productivity, based on the belief that current workers tend to refer others who are similar to themselves (Saloner, 1985; Montgomery (1991); Galenianos, 2012). Second, referrals can inform workers and firms about the quality of the match (Simon and Warner, 1992, Dustmann et al., 2015, Brown et al., 2012). However, there may be also negative effects of informal networks : workers may rely on informal networks as a last resort, which can be associated with low wage offers due to limited access to job opportunities through other channels (Loury, 2006), or the quality of the information transmitted through the network may not match the abilities of the job seeker (Bentolila et al., 2010).

Overall, the existing evidence for the effect of having found a job through friends and relatives on wages is mixed (Cappellari and Tatsiramos, 2015). Some studies find positive impact of social network of family and friends on wages (Simon and Warner (1992); Marmaros and Sacerdote (2002); Loury (2006)), while others find negative effects (Pistaferri

(1999); Bentolila et al. (2010)). Furthermore, these effects are not limited to wages (Cappellari and Tatsiramos, 2015) since informal networks lead to better matches may well result in lower separation rates (Dustmann et al. (2015)), and thus to higher employment stability.

Holzer (1988) shows that there is a positive link between having more employed friends and searching for a job through friends. Having more employed friends lowers the cost of using friends and relatives as a search method, which leads to a higher use of this channel. Studies using network proxies to define the relevant network, consider the quality of the network through the employment rate of social contacts. Theoretically this is considered to be the central measure of network efficiency. Kramarz and Skans (2014) investigate the role of fathers on the employment and earnings of their children, where the network defined at the family level is also directly observed. Wahba and Zenou (2004) consider the effect of network quality, which they proxy with the local unemployment rate or the number of family members in the labor force, on the probability of using friends and relatives for those employed but they do not consider labor market outcomes.

Granovetter (1973) main findings can be summarized in three points. First, he suggests that many job seekers receive their jobs through social networks and not only via classic formal channels. The second idea stressed by Granovetter is the relevant role played by weak ties as the network's most important information canal. Indeed, Granovetter's hypothesis shows that as opposed to strong links, more new information in the network is drawn by weak ties who have the advantage of being more dispersed and dissimilar. Third, Granovetter argues that the use of social contacts provide job seekers with more information about job opportunities and characteristics (Franzen and Hangartner, 2006). As a consequence, social networks tend to provide job seekers with better matches and better-paid jobs (Franzen and Hangartner, 2006).

However, Franzen and Hangartner (2006), using data on 8000 Swiss university graduates, provide some contrasting findings to Granovetter's hypothesis (1973 & 1974) showing that using social contacts is only helpful with respect to important non-monetary job characteristics. Indeed, young university graduates who receive their jobs through social networks are more likely to get jobs which are adequate to their educational degree and which offer them better perspectives. In the basis of their analysis, these authors conclude that although social networks seem to be associated with lower job search costs and higher non-monetary attributes, the hypothesis according to which social networks provide better wages could not be supported.

In conclusion, job matching issue between young individuals and job positions is an issue of high interest in order to study the human resources allocation in the labour markets. In France, we still know very little about the role of both formal and informal search methods available in the labour market on the young worker-job matching quality.

The fourth paper of this PhD work investigates this "important subject about which we know very little" (Granovetter, 1995). This chapter addresses the following question : When formal/informal channels have an advantage and when it is expected to find them ? and suggests several answers related to young worker-job matches.

## 1.4 Job Search Intensity

Studies focusing on the job search process from a sociological standpoint argue the assumption according to which job seekers can affect their likelihood of finding an employment throughout engaging in job search procedures which are convenient to the job's type being sought. If these channels have been conducted frequently enough, then this would be called job search intensity. The behavior of job searchers is generally modeled through the effort of each job seeker during the search period.

Overall, there are different ways of measuring job search intensity according to the literature review elaborated by White and Bryson (1994) on effective job search. These measures are mainly : the time devoted to search (Krueger and Mueller, 2008), the number of contacts per period or the number of search methods used (Devine and Kiefer, 1993). Furthermore, the authors suggest that in the U.K., increasing the number of methods used has a positive relationship with the probability of finding a job. In the U.S.A, however, this relationship does not hold and there actually seems to be a negative relationship between these variables. A limitation to using job-search intensity for measuring and studying the job-search process is the lack of a formal empirical definition.

Bortnick and Ports (1992) underline that the number of search methods used by job seekers appears to have relatively small effect on the likelihood of finding a job. The authors shows that the likelihood of obtaining a job increases slightly with each additional method of job search, and decreases when five or more methods were used. He adds that while job seekers who use two job search channels were slightly more likely to find a job than those who use one method, it is more the choice of the job search methods that matters than their quantity.

Bortnick and Ports (1992) find that the use of the public employment offices (alone or with another channel) provides the lowest chances of being employed at the next period. According to Sabatier (2002), the arrival rate of job offers depends positively on the intensity of the search effort as well as the combination of search technologies. Hence, focusing on the job search channels employed may provide useful information about which channels are more efficient.

However, job search success does not depend solely on the job seeker's ability to find a job, but is also determined by external factors and other circumstances. For instance, a tight labour market may increase the chances of finding a job for a less-skilled or experien-

ced individual, while location in a peripheral area without good access to an employment centre may limit job seekers search (Green et al., 2011).

McQuaid (2006) used the term employability to refer to the set of factors that together affect a person's chances of finding a job. The author classified this set of factors as individual factors (the person's skills, qualifications, length of unemployment, demographic characteristics, etc); personal circumstances (access to resources, family support, caring responsibilities, etc); and external factors (labour market demand, mobility) and in this way provided an integrated perspective of job search. An approach that takes as many of these factors into account is bound to provide a better picture of the effect of job seekers' efforts to find employment and better equip employment services and policy makers to support them.

Several researches underline that the probability of finding a job after engaging in a job search process depends significantly on the labor market status of the job seeker, that is, whether he is employed or unemployed searching for a job. Indeed, two out of every three jobs taken by young workers end within a year and many of those separations reflect job-to-job changes rather than layoffs (see Topel and Ward, 1992). This suggests that there are search or information frictions in the labour market that prevent worker types from immediately matching with their optimal job type.

Any model that aims to adequately describe actual labour market flows should therefore allow for job-to-job transitions (Gautier et al., 2010). As in Jovanovic (1979, 1984), the model provided by Gautier et al. (2010) predicts individual separation probabilities to be decreasing in job tenure because the good matches are the ones that survive. The next paragraph summarizes some research works distinguishing between off- and on-the job search.

### 1.4.1 Employed and Unemployed's Job Search

Job seekers can be either unemployed or employed but searching for a new job as a replacement to their current one. We have already enumerated and discussed (see the Introduction of this PhD work) the main difficulties faced by the former while looking for a job. In particular, we may retain the transition from school to job related problems, difficulties also to display particular signal of education due to the problem of "downgrading" of diplomas.

In addition, one may think about the negative scars of unemployment's duration dependance which can be accentuated during periods of high unemployment rates. Consequently not only unemployed job seekers are less likely to find a job, but also they can display inefficient job search strategies. Hence, they are more concerned with counselling and monitoring programs provided by public and private recruitment services. These latter are often associated with lack of efficiency and high-length search and match procedures.

Otherwise, they may find themselves forced to accept nonstandard and low-paid jobs often inappropriate to their qualifications. Or, they may also choose to engage into job search until finding the offer which maximizes their utility in terms of monetary and non-monetary job attributes. In the meanwhile, some employed workers may also engage into looking for new opportunities. That is called "on-the-job search". This can be possibly explained by job-mismatch, thus, dissatisfaction with the current job (working conditions or hours, wage, job security, career perspectives, etc.). These job seekers constitute a specific group due to their labor market status, somehow, much more advantageous as compared to those unemployed.

This distinction has already been explored by few theoretical and empirical researches, mainly after the 90s. Overall, two main research fields have merged. The first body of lite-

rature emphasize the premise that unemployed and on-the-job seekers are not so different in terms of job search behaviour forming an homogenous group of job seekers who look for the same job opportunities (Burdett and Mortensen (1998) and Van den Berg and Ridder (1998) Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007)).

These authors conclude that these two types of job seekers are likely to be in direct competition with each other. According to this assumption, the presence of employees searching for a job on the labor market imply an additional constraint for the unemployed searching. Consequently, these latter are assumed to have lower chances of finding a job (Eriksson and Gottfries (2005), Rogerson et al. (2005), Eriksson and Lagerström (2006)).

Differently, the second body of literature highlight that the of direct rivalry on the labor market between unemployed and employed job seekers is very strong and questionable (Longhi and Taylor, 2014). The evidence that these two types of job seekers are in direct competition implies that they display similarities in terms of characteristics, employment histories, search strategies and preferences. However, some researches show that this is not the case since employed and unemployed job seekers appear to have different priorities and preferences.

Several authors, Gorter et al. (1993) ; Lindeboom et al. (1997) ; Weber and Mahringer (2008), show that these two different types of workers use also different job search approaches resulting in different probabilities of success. One may think about the negative effect of unemployment duration's dependance on their probability to exit-out from unemployment and on their reservation wage. There also exists disparities among job seekers in terms of expected returns to job search and preferences for the job sought type. All these arguments render the conclusions rather mixed than systematic.



In the light of this literature, it seems that competition on the labor market, between unemployed and employed job seekers, is not sufficiently explored for the French case, particularly when it comes to study youth job search in this country. It is therefore necessary to understand the job search step by its economic, social and also political issues. In the case of France, it would be even a priority that continues to preoccupy political debate in order to establish appropriate policies for youth employment. It becomes obvious to focus on the issue of disparities between the unemployed and employed job seekers in terms of research strategies and intensity of their efforts. To examine this, a chapter will be dedicated to the study of these questions in order to be part of this debate by trying to provide clear and novel answers on this area.

## 1.5 Conclusion

How people search? Is search random and to what extent search strategies can be different? To whom social networks matter the most? and what about the job search effectiveness in terms of providing good matches?

We believe that studying the effects of both formal and informal job search channels in the matching process offers an interesting angle to tackle these three issues : search, access and matching. In particular if "it is unclear whether these contrasting systems differ dramatically in efficiency" (Granovetter, 1995). This is the aim of this PhD work.



## 2 The Determinants of Youth Job Access Channel in France

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0. A paper jointly written with Fathi Fakhfakh and Annick Vignes is based on this chapter



## 2.1 Introduction

The high level of unemployment among young people is a major issue in OECD countries, and has been for a long time (Freeman and Wise, 1982). The situation of young people on the French labor market is particularly worrying, as the youth unemployment rate was almost 18% in 2013<sup>1</sup> : despite a large number of public policies focused on financial incentives to encourage firms to hire young people, youth employability remains at a critical level. Recent articles seek to explain the high rate of youth unemployment in terms of the evolution of employment protection legislation (Noelke, 2015) or traditional explanations based on biased technical changes and the international trade hypothesis (Dutt et al., 2009)<sup>2</sup>. Although the recession does not help young people to find jobs (Bell and Blanchflower, 2011), their high unemployment rate clearly also depends on something other than classical demand and supply constraints or labour market regulations.

Another path of research must be explored, in terms of information asymmetry and moral hazard. When looking for a job, young people are characterised by having little or no work experience and some authors, like Ghiglini and Goyal (2010) or Granovetter (1995), highlight the high level risk aversion in firms when hiring young workers for their first jobs. Without any information on the intrinsic competence of the candidate and so facing a situation of moral hazard, the recruiter may be tempted to trust the opinion of acquaintances he shares with the job seeker. Social networks then play the role of additional informational device in the labor market, as underlined by Rees (1966), and can be an efficient way of finding a job (Pellizzari, 2010, Zenou, 2015). It is nowadays commonly accepted that, although various job-finding channels (such as job ads, public or private employment agencies) can be used, a conversation with a friend or family member over a cup of coffee is also an efficient method to find a job (Corcoran et al., 1980, Mortensen,

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1. source : Dares

2. These authors show evidence of a positive effect of trade openness on unemployment for capital-abundant countries

1987, Ioannides and Datcher Loury, 2004). Little is known, however about the way people search and what kind of search process leads to being recruited.

The Montgomery (1991) model of employee referrals underlines that it is optimal for firms to hire new workers using referrals from their most productive employees, since these workers tend to be linked to other workers with high unobserved productivity. From the exploitation of a detailed matched employer-employee data set, Hensvik and Nordström Skans (2016) confirm the Montgomery's hypothesis of professional network as a reputation signal. Their empirical results confirm that incumbent workers of high ability are more likely to be linked to high-ability workers. The authors argue that firms select workers with better unobserved abilities when hiring linked employees. Their findings emphasize the idea that firms use referrals of productive employees to attract workers with better unobserved abilities. This idea is also considered by Dustmann et al. (2015) who provide evidence that the use of professional networks improve the job matching (wage and tenure).

Starting with the empirical analysis of a French Insee survey, namely the "*Enquête Emploi, 2010*", this article seeks to identify the job-finding channels through which young workers found the job they were in when they answered the survey. Particular attention is paid to the role of social networks in job-finding. The level of youth unemployment differs greatly according to the level of diploma : nearly 40% of young people (15-29 years) without any diploma are unemployed, compared with 18% of the category 30-49 years<sup>3</sup>. In what follows, we assume that the efficiency of job finding channels differs according to the level of education of young people as well as their other socio-economic characteristics and their place of residence.

A first novelty of our paper is to differentiate between school networks and professional and friends/family networks. The reason we consider two different types of social networks is that the effect of some variables, such as the education level, might be diluted if we group together the professional contacts and the school contacts. Our hypothesis is that

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3. source : Observatoire des Inégalités, January, 2015

networks are of different nature and can be used differently depending on the individual's intrinsic characteristics (age, gender, origin, education) and their place of residence.

The second novelty of the paper then concerns the impact of the area of residence on job finding channels. The French population lives in rural areas (40%) or in urban ones, and some of these zones are classified as sensitive<sup>4</sup>. Going beyond Bayer et al. (2008) concerning the neighborhood effect on getting a job, we evaluate spatial social effects, *i.e.*, rurality and sensitivity as well as the interaction between them on how to find a job. Furthermore, while looking for the origin effects we do not consider a dummy for being French or not but we suggest, following Duguet et al. (2011), a more detailed measure, considering both the nationality of the young workers and that of their parents (father and mother).

Another strength of our work is its methodological contribution. Our approach adapts the Van De Ven and Van Praag (1981) binomial model with selection to the case of multinomial choices with selection. Both employed and unemployed workers are present in the initial sample but, because we analyze the different job-finding channels, we only consider employed people. This approach may prove equally useful in other settings involving the estimation of models with multinomial choices with selection.

In terms of the main findings, we conclude that the efficiency of job finding channels differs accordingly to young people level of education but also and more surprisingly to other intrinsic characteristics. Qualified people more often find a job thanks to the school networks when non qualified people are helped by their social networks. Whatever their level of education women are helped neither by their school networks nor by their social networks. Foreigners are more likely to find a job through both school and social networks whereas French with foreign parents cannot rely on their networks, neither social nor school. Finally, finding a job through social networks when living in sensitive urban zones

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4. Sensitive urban zones (ZUS) are urban or infra-urban territories defined by the authorities as being priority targets for urban policy, according to local factors relating to the difficulties that the inhabitants of these territories are experiencing (Source : "Insee - Définitions et méthodes - Zone urbaine sensible").

is less probable.

The paper is organized as follows. Section 2.3 presents the data and some stylized facts. The econometric model is introduced in section 2.4. Section 2.5 presents our results. The last section concludes.

## 2.2 Literature Background

Social networks play an important role when it comes to finding a job. A less explored question is whether this role has the same importance for very different types of job seekers. Margolis and Simonnet (2004), using French data, observe that young people with a technical or vocational education are more likely to find a job through social networks. Their explanation is in line with the findings of Rebeck (2000), who shows that when there are persistent interactions between universities and the job market (such as internship and apprenticeship), young people find a job more easily than when looking for a job once their studies are over. Our analysis of social networks is more detailed than that of Margolis and Simonnet (2004) : drawing on different information in our database, we are able to distinguish between different networks.

Looking at the socio-ethnic characteristics of network users, Elliott (2001) underlines the influence of ethnic networks on the dynamics of the informal job market. Using the same data, Bentolila et al. (2010) show that those who find a job through their contacts seem to be slightly younger, more likely to be male, less likely to be born in the U.S and white, more likely to be black or Asian, less educated, more experienced and more likely to work in small businesses. Because there is no information allowing to differentiate between people of different ethnic origins in French datasets, we focus on the parents' origins, distinguishing between French and non-French people, and between French and non-French parents.

The essential role of parents in their children's job-finding is emphasized by Kramarz and Skans (2014). Using original matched employer-employee data from Sweden, these



authors compare the influence of parental networks (strong ties) and ties involving relatives (weak ties). They show that obtaining one's first stable job in the firm where one's parents work is very frequent and that this effect is larger if the graduate's position is fragile, *i.e.*, low education, low grades. Conversely, weak ties (neighbors, in particular) are more influential for people with a higher level of education.

Looking further into the influence of neighbors, a pertinent question is then to evaluate the influence of the neighborhood on job-finding strategies. As far as we know, this question has been little examined by the literature. Bayer et al. (2008) provide evidence that the increased availability of neighborhood referrals affects a wide range of labor market outcomes including employment. It can be argued that, because they strongly influence the recruitment process, social networks may reinforce inequality and discrimination from the beginning of the hiring process (see Chauvac, 2011, Bessy and Marchal, 2009).

Although the literature on formal versus informal job search channels is rich, there is still a lack of empirical evidence on the role played by different kinds of networks (social, professional and school networks).

## 2.3 Data and Descriptive Statistics

The dataset is the French labor survey, namely the "Enquête Emploi" (Insee, 2010). Since 2003, the quarterly labor force survey is conducted on a sample of the French households and is carried out continuously one week per quarter. The surveyed sample is renewed every year. We use the wave of 2010 to analyse the influence of different socio-demographic variables on the likelihood of finding a job through a given job search channel.

We choose to study this wave (2010) because it concerns a period close to the 2008-2009 crisis. Kramarz and Skans (2014) explained that the use of social networks becomes more popular during periods of high unemployment rates. The 2010 wave of the labor survey then seemed a convenient period to evaluate the role of informal job-finding channels.

Our sample counted initially 94 421 young people (15-30 year-old) in 2010. We discard the inactive individuals (students and the NEET : Not in Education, Employment or Training) as they are not considered as looking for a job. Hence, we are left with 49,833 young active individual in 2010 (41,532 are employed (83.34%) and 8,301 are unemployed (16.66%). We consider only active individuals, *i.e.* 49,833 persons. The average age of the sample is 24.74 years. The proportion of employed young workers aged between 15-25 is slightly higher than the proportion of the 26-30 years old. 6.82% of working youth lives in a sensitive urban zone (SU zone) while 18.80% of them live in a rural area (see Table 2.1 for detailed statistics).

TABLE 2.1 – Individual characteristics

Variables	Percentage
<b>Sample size</b>	<b>N = 49.833</b>
- <b>Employed</b>	85.01
- <b>Unemployed</b>	14.99
Average age	<b>24.74</b>
- [15, 25]	50.48
- [26, 30]	49.52
<b>Gender</b>	
- Women	46.48
- Men	53.52
<b>Nationality</b>	
-Both parents French	79.69
-One parent is not French	6.97
-None of them is French but son/daughter is	6.53
-Neither the parents nor their child are French	6.81
<b>Highest education level</b>	
- High (at least bachelor degree)	19.59
- Average (2 years after Baccaalaureate degree)	16.33
- Low (Baccaalaureate degree)	27.09
- No diploma (less than Baccaalaureate degree)	36.99
Place of residence	
- Living in Sensitive Urban Zone	6.82
- Living in Rural area	18.80
<b>Access channel to the current job</b>	<b>N = 33.452</b> ( <i>cf. below</i> )
- Direct application	49.74
- Social and professional network	25.55
- School network	6.67
- Public employment agencies	6.58
- Private employment agencies	1.94
- Others (including job exams)	9.52

The number of observations where access channels are available is 20% lower than the expected number. This is due to missing answers, concerning the channels.

Source : Labor survey, Insee (2010), authors calculation. Weighted statistics.

### 2.3.1 The job finding channels

Sabatier (2002) emphasizes that several studies, including France, point out the strong heterogeneity of the job search channels (Marchal, 1995). These channels are built around three dominant strategies (Lindeboom et al., 1997) : the market procedures (unsolicited applications and job adverts), reliance on institutional intermediaries (public services and private agencies) and social networking (personal and professional relationships). Since it is argued that these search methods seem to have discriminatory impacts on individual transitions, especially on the duration of unemployment (Osberg, 1993), this requires more in-depth study of ways in which such procedures can lead to disparities in terms of employment probabilities.

In what follows we explain the way we build the job access channels' variable. In order to identify the job search channel through which the young workers found their current jobs, the survey questionnaire asks "Through which channel did you find your current job?". This question provides several answer options from which the respondent must choose only one alternative. The questionnaire proposes 10 different alternatives as possible answers. We rebuilt these options into one variable taking one of the following 6 exclusive alternatives.

For more details, Table B.1 in the Appendix provides an excerpt of the survey questionnaire about the channel through which an individual found his/her current job.

- We call "**Direct Application**" the case where the respondent found a job either through direct application or through job adverts (options 1 and 3, Table B.1 in the Appendix). This is the most frequent job access channel. It allows half the population (49.74%) to get a job.
- "**Social network**" designates the case where a job is found through personal or professional contacts : family relationships or personal/professional acquaintances, a contact from the firm or previous/spouse's employer (options 2, 8 and 9, Table B.1 in the Appendix). This is the second most frequent job access channel (25.55%).
- "**School network**" concerns the situation where the job is found thanks to the

worker's former school or training institution (option 6, Table B.1 in the Appendix). It provides job to 6.% of the population.

- **"Public agency"** is the case where people found a job through the public employment office (option 4, Table B.1 in the Appendix). This allows 58% of young people to get a job.
- **"Private agencies"** is the case where people found a job through the private agencies (option 5, Table B.1 in the Appendix). Even though the private agencies provide employment to only 2% of young workers, we believe that this channel should be considered separately because of its specificity *i.e* its functioning mechanism as well as its target population.
- The last possibility concerns people finding a job either through job examinations or through "any other" method. Even if we have no detailed information on the "any other" method, we believe that this channel **"others"** may cover self-employed, forums, career fairs or internet networks (linkedin, monster, other). Since the "any other" channel is unspecified, we suggest to gather it with the job examinations, thus, forming a group of procedures that we define as "others" (options 7 and 10, Table B.1 in the Appendix). This category was also suggested by Margolis and Simonnet (2004) (job exam + others). We decide to keep this category as the reference alternative instead of leaving it out from the analysis as in Flap and de Graaf (1988). We notice that the category "others" provided job access to 9.5% of the total employed in our sample.

### 2.3.2 The individual characteristics

We believe that job access channels depend on the age, the gender, the level of education, the marital status or the nationality of the worker. We then use the following variables :

- **The origins** : Concerning the nationality, we consider different types depending on

the parents' origin. We construct a new variable describing the worker's origin which takes 4 different values described as follows : (1) if both parents are French, (2) if one parent is French but the other is not, (3) if none of them is French but their son/daughter is and (4) if none of them is French and their son/daughter is not too.

- **The diploma :** Diploma are aggregated into 4 levels as in Aeberhardt et al. (2011) :
  - High : High-educated, Bachelor Degree and Business or Engineering Master
  - Middle : Mid-educated, Higher National Diploma and the Diploma of Higher Education (2 years of vocational and technical college diploma).
  - Low : is the Baccalaureate degree (Bac) holders which is the French general secondary education certificate.
  - No diploma : without diploma or maximum vocational aptitude and vocational education certificate.

The examination of the diplomas' distribution shows some important disparities as almost 37% of young workers are not educated while only 19.59% are at least bachelors. Table 1 shows also that a great proportion of young workers find their jobs more often through direct applications (49.74%) or networks (32.22%) rather than the formal job search channels such as the institutional recruitment intermediates (public and private, together 8.52%) (see Table 2.1).

- **The area of residence :** To catch the special influence of the area of residence, we take into account the place of residence, we take into account two effects, *i.e.*, the local neighborhood and the regional effect<sup>5</sup>. Concerning the local neighborhood, people can live or in a rural area, or in a urban area or in a sensitive urban zone (SU zone). The Region effect is bi-dimensional. We attribute to each region a coefficient of rurality (low, average and high) and a coefficient of sensitive urban zones (low, average and high), depending on the density of these zones in the region. For example

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5. At the time of the survey, France was divided into 22 regions with their own prerogatives and possibilities of public policies

the Ile de France region is characterized by a low level of rurality and a high level of sensitivity. Note here, that because of its particularity (the biggest region, the highest level of SU zone), this region is isolated and considered as the reference case. In order to construct the groups of regions, we take as reference the Insee maps describing the distribution of all French regions according to these two characteristics : degree of rurality and frequency of sensitive urban areas (see figure B.2 and figure B.1 in the Appendix).

Figure B.1 and Table B.2 in Appendix show the distribution of the sensitive urban zones within the French regions and we distinguish 3 different cases :

1. Paris region (characterized by a lot of SU zones)
2. Regions with an important number of SU zones (PACA, Rhone Alpes and Nord-Pas-De Calais)
3. Regions with a low number of SU zones (region Centre, H.Normandie, Champagne-Ardenne, Picardie, Lorraine, Pays de la Loire, Bretagne, Aquitaine, Midi-Pyrénées, Corse, B.Normandie, Poitou Charentes, Limousin, Bourgognes, Franche-Comté, Auvergne).

Figure B.2 and Table B.3 display the distribution of the urban population density in all French regions : we distinguish the 3 following cases :

1. Regions with a high level of urban areas (Paris Region, Nord-Pas-De Calais, Alsace, Rhone-Alpes, Roussillon, Provence)
2. Regions with an average level of urban areas (Champagne-Ardenne, Picardie, H.Normandie, Centre, Lorraine, Pays de la Loire, Bretagne, Aquitaine, Midi-Pyrénées, Corse)
3. Regions with a low level of urban areas (B.Normandie, Poitou Charentes, Bourgogne, Franche-Comté, Limousin, Auvergne).

Table 2.2 shows that women are more successful than men with direct applications and public agency. Equally, they are more often recruited through competitive exams or other channels, compared to men who seem to rely more on the referral hiring. A larger proportion of young workers aged 15-25 years obtain their jobs through school networks compared to elder youth (60.17% compared to 39.83%).

However, we find that elder youth are more successful with private agencies (65.49% compared to 34.51%) and other channels ("other) than the youngest workers.

For each variable we perform a Chi squared test which shows that all the statistics reject the independence hypothesis between the job access channel and the explanatory variables.



TABLE 2.2 – Distribution of the entry channels to the current job

Variables	Direct	Network	School	Public	Private	Others
<b>Age</b>						
- [15, 25]	49.18	49.18	60.17	45.84	34.51	33.55
- [26, 30]	50.82	50.82	39.83	54.16	65.49	66.45
<b>Gender</b>						
Women	53.16	21.17	6.71	7.72	1.43	9.83
Men	46.71	29.44	6.64	5.56	2.39	9.26
<b>Nationality</b>						
-Both parents French	49.76	25.08	6.66	6.08	1.92	10.50
-One parent is not French	47.40	27.41	8.26	7.25	1.95	7.73
-None of them is French but son/daughter is	50.08	25.52	6.05	6.81	1.87	9.66
-Neither the parents nor their child are French	41.55	36.39	7.06	5.92	2.66	6.42
<b>Education</b>						
- No diploma	46.10	18.62	8.71	4.71	3.15	18.71
- Low	53.83	22.38	8.11	6.40	1.89	7.38
- Average	51.06	25.59	6.45	6.37	1.66	8.87
- High	48.98	30.83	5.03	7.84	1.48	5.83
<b>Sensitive Urban Zones</b>						
- Not SUZ	49.24	25.96	6.72	6.05	1.95	10.08
- Regions with few SUZ	50.08	24.98	6.45	6.93	2.00	9.55
- Regions with average SUZ	47.38	28.27	6.58	6.39	1.88	9.49
- SUZ in Paris region	46.68	25.67	8.11	4.27	2.39	12.88
<b>Rural areas</b>						
- Not rural areas	48.48	25.78	7.00	6.26	2.09	10.39
- Regions with few rural areas	47.39	27.08	7.41	5.52	1.92	10.66
- Regions with average rural areas	50.92	24.81	5.92	6.80	1.95	9.61
- Regions with high rural areas	51.09	24.49	6.50	7.08	2.17	8.68
<b>Total</b>	<b>49.14</b>	<b>25.93</b>	<b>6.75</b>	<b>6.18</b>	<b>1.96</b>	<b>10.03</b>

Note : SUZ means Sensitive Urban Zone. SUZ are urban or infra-urban territories defined by the authorities as being priority targets for urban policy, according to local factors relating to the difficulties that the inhabitants of these territories are experiencing (Source : Insee).

Labor survey, Insee (2010), authors calculation. Weighted statistics.

The next section presents our empirical methodology. We study the influence of individual and socio-spatial characteristics on the probability of finding a job through a given access channel, controlling for selection on employment.

## 2.4 The econometric model

The dependent variable is the job access channel and takes 6 exclusive alternatives : we estimate here a *Multinomial Logit model* of job access channels. We choose the "others" channel group as the basic alternative.

Let's denote  $X_i$  as a vector of individual characteristics and  $Y_i = j$  if the individual  $i$  got a job through the alternative  $j$  ( $j= 1, \dots, J$ ). Thus, the model can be written as follows :

$$Y_i = F(X_i, \beta_j) \quad (2.1)$$

Hence, the probability of finding a job through the alternative  $j$  is :

$$Pr(y_i = j | X_i) = \frac{\exp(X_i \beta_j)}{1 + \sum_{k=2}^J \exp(X_i \beta_k)} \quad (2.2)$$

We keep as explanatory variables the following set of individual characteristics : gender, education level, origins, parent's occupational status, rurality and sensitivity of residence area. The basic alternative is the "others" channel group.

Restricting the sample to the only occupied workers may generate a selection bias. We have then to test for the selection and to correct for it (when it occurs). In fact, the employability is not a random phenomenon, given that there is a selection at the hiring process based on several observable and unobservable characteristics.

Taking into account the selection problem induces the use of a control function approach. We adapt the (Van De Ven and Van Pragg, 1981) two-steps estimation procedure for a probit with a selection to our case of multinomial model with selection. In the first

step, we model the likelihood of being employed, depending on a set of exogenous explanatory variables using a *probit* model. This probability of being employed can be written as follows :

$$\Pr(m_i = 1) = G(Z_i, \alpha) \quad (2.3)$$

With  $m_i = 1$  if the individual is employed and 0 if unemployed.  $Z_i$  denotes the set of exogenous variables affecting the probability of being employed and define the selection equation (individual characteristics, household characteristics, etc.).

To allow for the identification of the model, the exclusion restriction has to be respected. This is the case since among the set of explanatory variables ( $Z_i$ ), we control for the housing type : owners, private rental, social housing<sup>6</sup> or free housing<sup>7</sup> and for children (if any). Children is frequently used as instrument in wage equation with selection Heckman (1979). We consider housing type as a good instrument for the employment equation. We do the assumption that housing type may impact the probability of being employed or not without influencing the way of getting a job. Getting a social housing is more probable for unemployed people while these dwellings are reserved to low-income people. In the same way, people who have no job are more likely to live in free housing.

These variables (housing type and having children) occur only in the employment equation and not in the multinomial logit model of job access channels. However, we argue that the latter variables are not correlated with the probability of finding a job through any given channel. Then, we compute the predicted value of this employment probability for each individual.

This value is needed to calculate the generalized residual ( $u_i$ ) suggested by Gourieroux et al. (1987) :

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6. In France, social housing are provided at controlled rents by the State or local authorities to lower incomes households

7. Free housing designs the case of people living with their relatives' without paying a rent.

$$\hat{u}_i = \frac{\phi(\cdot)}{\Phi(\cdot)[1 - \Phi(\cdot)]} [m_i - \Phi(\cdot)] = \begin{cases} \frac{\phi(\cdot)}{\Phi(\cdot)} & \text{for the employed } m_i = 1. \\ \frac{-\phi(\cdot)}{[1 - \Phi(\cdot)]} & \text{for the unemployed } m_i = 0. \end{cases} \quad (2.4)$$

With  $\phi(\cdot)$  the probability distribution function and  $\Phi(\cdot)$  the cumulative distribution function of the standard normal distribution.

The equation (2.4) can be identified as the inverse Mills ratio *à la* Heckman, for the whole sample. This term presents two important characteristics as a residual. First, it has mean zero over the whole sample. Second, it is uncorrelated with the variables that appear as explanatory variables in the first step *Probit* model (Vella, 1998).

At the second step, we model the "choice" of one alternative to get a job. To test for the selection problem, the generalized residual is introduced as an additional explanatory variable in the equation (2.2) which leads to the following equation :

$$\Pr(y_i = j | X_i) = \frac{\exp(X_i\beta_j + \hat{u}_i\lambda_j)}{1 + \sum_{k=2}^J \exp(X_i\beta_k + \hat{u}_i\lambda_k)} \quad (2.5)$$

If the array of coefficients  $\lambda$  associated to the generalized residual is globally significant, then we can conclude that the sample of employed workers is not random and that there is a selection problem.

Concerning the estimation of the *Multinomial Logit* Equ. ((2.5)), the significance level for each explanatory variable and a Wald test for the global significance of the model are presented. In order to test the IIA (the Independance of Irrelevant Alternatives) assumption, a test of coefficient equality between two alternatives is performed. This test shows clearly that the influence of all the explanatory variables on the probability of being in each alternative is significantly different between each pair of access channel. We conclude in a nutshell that independent variables influence differently and significantly the probability of getting a job through each alternative. The assumption that two or more categories are

dependent<sup>8</sup> is then rejected. What follows presents the main empirical results.

## 2.5 The econometric results

As mentioned above, a two-steps estimation procedure tests the existence of a selection bias and controls for it. This implies to estimate the general residual coefficient through a global significance test : the estimates show that these coefficients are globally significant. Hence there is a selection problem that we correct for (cf. the results reported in both Table 2.3 for the employment equation and Table 2.4 for getting a job<sup>9</sup>). However, since the generalized residual is consistently significant in the structural model, we cannot reject the sample selection bias. Selection in our case means that our sample is not random and being employed depends on several unobservable variables that seem to be correlated with the probability of finding a job through a given channel. Alternatively, we can assume that an omitted variable bias (à la (Wooldridge, 2010)) is avoided by controlling and correcting for selection. In what follows, we first present the results related to the selection equation (employment probability). We then discuss the determinants of the job access channels once we control for selection.

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8. Several tests have been proposed to test this assumption. The two most common are the Hausman and McFadden (1984) test and the Small and Hsiao (1985) test. This latter is used here and the results does not reject the null hypothesis according to which when individuals are asked to choose among a set of alternatives, their odds of choosing one outcome category over another outcome category should not depend on whether some third alternative is present or absent. Both tests employ the same general strategy : for each alternative, delete individuals who chose that alternative and re-estimate the model for the remaining alternatives then construct a test comparing the new estimates with the original ones. The results of the test IIA (Independence of Irrelevant Alternatives) are available on request from the authors.

9. Estimation results of the model without treatment for selection bias are available upon request

### 2.5.1 The determinants of the employment probability

Table 2.3 reports the estimation of the selection model where the dependent variable is "being employed" or not. This equation is used as the selection equation in the two-steps procedure when estimating the multinomial model. Both the coefficients and the marginal effects of each variable on the probability of being employed. Two sets of variables are considered. The first concerns individual characteristics and the second tends to measure the influence of the individuals' socio-spatial environment on his/ her probability to find a job. A first observation is that the eldest young workers are more likely to find a job compared to the youngest and this probability increases by 0.8% for each additional year. The more experienced the people, the higher the probability to be employed. The probability of being employed is lower (-2.3%) for women compared to men and this joins European reports (OECD, 2012) findings<sup>10</sup> (OECD, 2012).

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10. Closing the Gender Gap : Act Now, OECD publication, December 2012

TABLE 2.3 – Individual employment probability

Variables	Coefficient	z-value	Margin effects
Age	0.038***	188.66	0.008
Women	-0.112***	-86.87	-0.023
Living In couple	0.413***	263.73	0.084
Children	-0.145***	-76.46	-0.031
<b>Nationality according to parents origin</b>			
(Ref.Both parents are French)			
One parent is not French	-0.233***	-102.09	-0.051
None of them is French but their child is	-0.325***	-136.13	-0.075
Neither the parents nor the child are French	-0.278***	-116.60	-0.062
<b>Education level (Ref.No diploma)</b>			
Low	0.307***	192.67	0.068
Average	0.440***	202.77	0.091
High	0.402***	185.95	0.085
<b>Mother status (Ref.manual)</b>			
skilled	0.092***	31.13	0.018
semi-skilled	0.012***	3.46	0.002
craft	0.097***	25.57	0.019
unskilled	0.020***	9.03	0.004
inactive	-0.140***	-59.94	-0.031
unknown	-0.009**	-1.85	-0.002
<b>Father status (Ref. manual)</b>			
skilled	0.045***	20.13	0.009
semi-skilled	0.070***	32.11	0.014
craft	0.127***	58.48	0.025
unskilled	-0.037***	-17.85	-0.008
inactive	-0.283***	-82.19	-0.068
unknown	-0.123***	-49.23	-0.027

**Housing type** (Ref. private rental)

Social	-0.180***	-100.56	-0.042
Owner	0.150***	99.73	0.029
Free of charge	0.225***	52.02	0.042
<b>Living in a rural area</b>	<b>0.159***</b>	<b>47.84</b>	<b>0.024</b>

**Region # rur**

**REF** : Not rural in regions with few rural areas

Rural in regions with few rural areas			0.033
Not rural in regions with average rural areas	0.134***	52.19	0.028
Rural in regions with average rural areas	0.061***	14.65	0.045
Not rural in regions with high rural areas	0.181***	56.66	0.037
Rural in regions with high rural areas	0.106***	22.04	0.053
<b>Living in a SU zone</b>	<b>-0.200***</b>	<b>-48.01</b>	<b>-0.051</b>

**Region # SU zone**

**REF** : Not SUZ in Paris region

SUZ in Paris region			-0.038
Not SUZ in regions with average SU zone	-0.129***	-61.67	-0.023
SUZ in regions with average SU zone	-0.103***	-19.06	-0.061
Not SUZ in regions with few SU zone	-0.244***	-87.76	-0.048
SUZ in regions with few SU zone	-0.298***	-57.52	-0.110
<b>_cons</b>	<b>-0.036***</b>	<b>-6.58</b>	

Note : Reported estimates are the coefficient, T-stat and the marginal effect of each variable  
 Marginal effects for the interaction terms result from our own calculations, as the difference between the corresponding average probability and the average probability for the category of reference. Weighted estimates.

SUZ means Sensitive Urban Zone. For example, if we look at the interaction term between the subgroups of regions and the dummy variable SUZ, we can read that people living in a SUZ of a subgroup of regions characterized by few SU-Zones, are 11% less likely to be employed compared to those who live in the Paris region but not in a SU-Zone



Gender discrimination at the recruitment and the wage levels (Gobillon et al., 2015) in addition to strong incentive policies to keep mothers at home (subsidies for child care) lower the probability for women to work. Not surprisingly we find this effect in this estimation, since the fact of having children decreases this likelihood by 3.1% compared to job seekers who have not children. We also look at the children effect by gender and note that while the effect of having children increases slightly the probability of working for men (+0.8%), it decreases strongly this probability for women (-7.9%)<sup>11</sup>. Living in couple increases by almost 8.4% the probability of being employed, compared to being single<sup>12</sup>.

Concerning the influence of origins on the probability of finding a job, we find that having foreign origins (at least one parent is not French), diminishes the likelihood of finding a job. Among youth with foreign origins, the worst situation concerns French youth with two foreign parents (-7.5%). Surprisingly, non French individuals have a slightly higher probability of finding a job than French individuals with non French parents (-6.2% instead of -7.5%). This effect can be due to unobserved heterogeneity, difficult to explore due to poor information in the data set.

Looking at the effect of education, we note that the highest diploma have a significant positive effect on the probability of finding a job compared to the low educated, particularly if this diploma is higher than the Baccalaureate degree. The high diploma effect can be minored by the fact that we do not distinguish between selective business or engineering schools or PhD and non selective academic cursus<sup>13</sup>. Baccalaureate holders are 6.8% more likely to be employed compared to the low educated, while those who achieved a short university cursus (Middle) observe their employment probability increasing by 9.1%. The more educated have a probability of being employed which is 8.5% higher than the low

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11. Results are available upon request

12. We suspect the endogeneity of the "living in couple" variable but instruments are not easily available : obviously, the decision of being in couple may depend on being employed

13. In France, a large proportion of students with better abilities are recruited and educated in business or engineering schools after their baccalaureate while the others study in the universities.

educated. This is in line with recent studies which highlight the positive returns to education and the high impact of education on labor market participation (also from a gender point of view). Having a diploma helps getting better wages and to avoid unemployment spells (OECD, 2014).

The influence of the parents' occupation on the employability of their children is then evaluated. Skilled parents help children to find a job and this may be explained by the differences in human and social capital. There exists also a positive effect when the parents (mother or father) are craft-persons and this suggests the existence of a social network effect or the capacity for these parents to create jobs. Finally having one inactive parent has a strong negative effect and this effect is enhanced when it is the father who is inactive (in average -3.1% for the mother and -6.8% for the father).

The influence of both the neighborhood of the place of residence and the characteristics of the residence region is also estimated. The place of residence, in addition to other variables which effects are described previously, might reflect some relevant realities on the challenges faced by young job seekers if they live in a rural area or in a sensitive urban area. The best situation is to live in a rural area where young people have a higher probability (+2.4%) to work. The first message here is that living in a rural neighborhood is not an obstacle to find a job. This can be a counter-intuitive result. We could expect that living far from areas with high economic activity and where institutional employment intermediates are less available or difficult to achieve, might penalize access to jobs. However, we suspect that living in a rural area for young people is an endogenous choice : they live there because they have a job, if not, they would probably leave for bigger cities.

We then look at the cross-effects between the type of neighborhood and the rurality of the region of residence. Compared to those who live in an urban area of a region characterized by a low number of rural areas, all the other cross-effects exhibit higher probability of being employed. The highest effect is observed for those who live in a rural area of a predominantly rural region (characterized by high level of rurality, +5.3%), followed by

those who live in rural neighborhood of quite rural regions (+4.5%). It is well known that an important part of young workers move from rural to non rural areas for higher job opportunities : those who stay in a rural area are also those who estimate they can, or already have found a job. In this context, a recent study of Brutel and Levy (2011) for the Insee, shows that almost 95% of the overall French population live under the economic influence of urban areas<sup>14</sup>.

The results show important disparities in terms of job access compared to other advantaged urban areas (-5.1% on average). When looking at the cross-effects between the type of neighborhood and the degree of SUZ of the region of residence, we note negative effects for all the situations, compared to those who live in Paris region and not in a SUZ neighborhood. Young workers who live in a SUZ in Paris regions, are less likely to find a job (-3.8%) than those living in the Paris region and not in a SUZ neighborhood. Living in SUZ in regions with high SUZ (dominated by Marseille, Lyon and Lille) lowers the probability of finding a job by 6.1% . However, the worst effect (-11%) is observed for those who live in a SUZ neighborhood, in the remaining part of France (*cf.* Figure 1). These results are in line with those of Chevalier and Lebeauupin (2010) who underlines that inhabitants in SUZ are, in average, younger and low educated than in the rest of France : they come more frequently from immigration and more frequently live in social housing. The rate of employment is lower in these areas.

In addition to these socio-demographic variables, we control for some variables describing the household characteristics such as the housing type. Workers who are hosted by their parents or are owners are more likely to find a job compared to those who use the private rental. On the contrary, living in social housing is associated with a lower probability of being employed (-4.2%). Again, we suspect here that living in social housing is a signal of unobserved factors which participate to reduce the probability of finding a job

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14. In France, more than 50% of the population live in cities with more than one hundred thousand inhabitants

(income and sometimes, ghetto effect).

## 2.5.2 Probability of finding a job through a particular access channel

The next step is to estimate the multinomial logit model controlling for selection. Table 2.4 reports the marginal effects of each explanatory variables (*see coefficients in Appendix Table B.4*) on the probability that a young worker finds a job through a given access channel. The dependent variable here is the job access channel which takes 6 exclusive alternatives : direct procedures (direct job applications and job *ads*), network of personal and professional contacts, school networks, public employment agencies, private employment agencies and other channels.

The estimation shows that the probability of finding a job through social networks (personal and professional contacts) and formal employment intermediates (public and private), increases with age. The probability of entering to the current job through social networks increases by 0.2% for each additional year. The likelihood of being successful with the public employment office increases by 0.3% for each additional year (+0.1% with the private channel).

An important result is that the school network effect decreases when people get older (−0.7% for each additional year) : school networking (school contacts, traineeship, career-days, etc.) helps young job seekers in the very beginning of their professional career. On the contrary, the social network effect positively increases with age (+0.2%) which suggests that the more people work, the more important their social network becomes.

These results refine those of Granovetter (1995) or Granovetter (1973) who simply consider a global social network measure without distinguishing between school and social networks which is the case in this study. This author underlines the role of social networks in providing first job seekers (and also their recruiters) with better information about

vacancies and job opportunities : he also underlines that the influence of social networks diminishes over time.

Because we make the difference between two types of networks, we highlight opposite effects. First, the school network effect diminishes over time, in line with Granovetter's results. Second, we find that, what we call a social network effect increases over time and this is more in line with Franzen and Hangartner (2006), who suggests that social capital is accumulated overtime and work experience.

We conclude that compared to the eldest, younger graduates benefit more from school networks and direct applications. In fact, these individuals do not have an important working experience and do not know well their type or the labor market requirements, hence they may be more likely to use referral hiring (careers' days, forums at school, traineeship offers, apprenticeship, etc.) as a first tool to get their first job. The eldest are more successful with the accompanied job search procedure, through applying via an existing data set of job offers either in the private or public organizations.

TABLE 2.4 – The determinants of job finding channels

	Direct applications	Social network	School network	Public agencies	Private agencies	Others						
Age	-0.007 ***	-71.87	0.002 ***	28	-0.007 ***	-153.7	0.003 ***	64.48	0.001 ***	48.41	0.008 ***	128.4
Women	0.070 ***	140.6	-0.071 ***	-162.6	-0.007 ***	-26.83	0.018 ***	73.98	-0.011 ***	-83.7	0.000	0.25
In couple	0.016 ***	22.63	-0.004 ***	-6.94	-0.011 ***	-33.71	0.005 ***	14.81	0.001 ***	3.32	-0.006 ***	-13.7
<b>Nationality</b>												
<b>Ref : FR</b>												
FR. 1P FR	-0.020 ***	-19.23	0.020 ***	21.75	0.013 ***	23.46	0.005 ***	10.12	0.003 ***	8.33	-0.020 ***	-34.6
FR. 2P NFR	0.016 ***	13.15	-0.005 ***	-5.36	-0.001 **	-2.39	-0.006 ***	-11.64	0.002 ***	6.69	-0.005 ***	-7.31
NFR	-0.061 ***	-55.23	0.100 ***	95	0.008 ***	13.5	-0.009 ***	-17.74	0.007 ***	20.17	-0.045 ***	-91.4
<b>Education level</b>												
<b>Ref : No diploma</b>												
Low	0.009 ***	11.32	-0.050 ***	-68.37	0.023 ***	67.15	-0.013 ***	-32.69	0.002 ***	7.59	0.030 ***	70.47
Average	0.041 ***	41.28	-0.094 ***	-109.9	0.057 ***	106.8	-0.004 ***	-8.5	0.000	-0.12	0.001	1.2
High 4	-0.026 ***	-26.8	-0.131 ***	-162.7	0.067 ***	122.97	-0.021 ***	-46.95	0.014 ***	47.25	0.097 ***	156.3
<b>Mother's occ.</b>												
<b>Ref : Manual</b>												
Craft	0.015 ***	10.84	0.032 ***	27.81	-0.032 ***	-46.43	-0.009 ***	-14.51	0.002 ***	3.25	-0.007 ***	-9.22
Skilled	-0.015 ***	-14.51	0.017 ***	18.77	0.005 ***	8.45	0.000	-0.26	-0.014 ***	-45.9	0.007 ***	11.84
semi-skilled	0.021 ***	17.07	0.008 ***	7.54	-0.036 ***	-58.96	0.009 ***	15.31	-0.001 ***	-3.32	-0.001	-0.97
unskilled	0.015 ***	17.79	0.012 ***	16.93	-0.027 ***	-55.58	0.006 ***	16.32	-0.006 ***	-18.6	-0.001 **	-2.03
inactive	0.001	0.69	0.008 ***	9.98	-0.021 ***	-38.47	0.002 ***	5.44	-0.005 ***	-14.6	0.014 ***	24.03
<b>Father's occupation</b>												
<b>Ref : Manual</b>												
Craft	-0.037 ***	-46.33	0.075 ***	103.94	0.001 ***	2.8	-0.022 ***	-61.98	0.000	0.99	-0.018 ***	-39.2
Skilled	0.030 ***	38.41	-0.016 ***	-24.16	0.003 ***	8.95	-0.011 ***	-28.96	0.009 ***	40.95	-0.015 ***	-35.8
semi-skilled	0.012 ***	15.32	0.024 ***	35.8	-0.012 ***	-35.57	-0.015 ***	-42.19	0.003 ***	15.46	-0.012 ***	-25.6
unskilled	0.021 ***	27.5	-0.027 ***	-41.61	0.009 ***	22.41	-0.003 ***	-7.41	0.003 ***	12.07	-0.003 ***	-7.11
inactive	-0.021 ***	-12.04	-0.035 ***	-25.66	-0.009 ***	-10.94	0.022 ***	24.33	0.000	0.11	0.042 ***	31.23

\* Significant at the 10%, \*\* Significant at the 5%, \*\*\* Significant at the 1% level.

Note : The model estimated is a multinomial logit model. Reported estimations are the marginal effects of each variable on the probability of finding a job through a particular job search channel. Weighted estimates. The student test (z-values) for the interaction variables is not reported here as the average marginal effects were computed by authors after estimating the probability of being in each alternative. However, we report the student test of interaction variables in the Appendix (Table B.4 and B.5 with the coefficient estimates).



Gender also matters in determining the job access channel. Women benefit less from their social network (-7.1%) and slightly less from their school network (-0.7%). This is in line with a very new result driven by mathematicians Avin et al. (2015) who find a glass ceiling effect for women in social networks where there are more men than women. This brings into the light that the differences between women and men network structures are important to their long-run adjustment <sup>15</sup>. The results show that women have more success with direct applications (+ 14.7%) and with public employment agencies (+ 1.8%) but are less lucky through the private agencies (- 1.1%). This is partially in line with the findings of Margolis and Simonnet (2004) who show that men are more likely to find their current jobs through social networks compared to women.

When we look at the origins of these young workers (French, Non French), the results depend also on the parents' origins. When one parent is French, the networks (both social and school) are more probable as well as public agencies. However, French individuals with two non French parents are less likely to get a job through social and school networks (-0.5% for social networks and -0.1% for school networks). They have less possibility to find a job through public agency. Remind that this is also the category of young people suffering more from unemployment.

Concerning non-French people, the probability of finding a job through the social network channel is extremely high (+10%) and this suggests a community effect as underlined by Battu et al. (2011) using British data. The probability of finding a job with direct application for this population is lower and very important (-6.1%). For the three populations (French with one non-French parent, French with two non-French parents, non French), we observe a high negative impact on using the any "other" channel (exam and self-employment) compared to native workers. One possible explanation could be their lack of information about the French officialdom. Pailhè and Meurs (2010) highlight the under-representation of immigrants and their descendants as permanent officials in the

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15. for more details see Hagan (1998), Gerstel et al. (1985)



French public service. The authors argue that the practical arrangements of the recruitment (contest with different tests based on a good level of general knowledge) discourage this population. Moreover, the presence of binding rules constitutes a legal closure to immigrants. Thus the restriction of competition only to European Union citizens, should mechanically reduce the presence of non French among potential candidates. Audier (2000) emphasizes that this can have indirect effects on the next generations of immigrants descendants while having a permanent official parent affect positively the probability for the child to become also an official in the future.

The role played by the education level deserves some attention. The high-educated people are 13% less likely to find a job through social networks but are 9.7% more likely to find a job through the "others" channels. Concerning the school network, we observe an increasing effect with the diploma (the higher the level of education, the higher the positive school network effect) : the most graduated are 6.7% more likely to obtain their job through school network. The low educated find a job essentially thanks to their social network or the public agencies.

When controlling for the impact of parents' occupation on the job access channels, it appears that fathers and mothers influence differently. Having a Craft, semi-skilled or unskilled mother diminishes the probability of finding a job through school networks, but increases the probability of being employed thanks to a direct application. The effect is opposite for young people with skilled mother (positive for school networks, negative for direct application).

Concerning the area of residence, we observe that living in a rural region negatively affects the probability of getting a job through networks channel both social and school. As a consequence, the formal channels as direct applications or institutional intermediates are more efficient in terms of getting a job. We then looked at the interaction between neighborhood rurality and region rurality. Clearly living in an urban neighborhood in an urban region is associated to the highest probability of accessing to employment through

networks, both social and school. It is also in these areas where the economy is more dynamic and the information easier to find, that efficient networks can be built.

Living in a SUZ also affects the way of finding a job. Clearly, if SUZ inhabitants have more difficulties to find a job by themselves (direct applications or social networks), it seems that institutional channels are more efficient for them. We observe a positive effect on the school network and the public and private agencies. This last result could be explained by efficient public policies concerning these areas whereas the negative effect related to personal relationships could reflect the stigmatization young people in these areas suffer from (see Duguet et al. (2011)).

## Conclusion

This paper contributes to the debate about the youth labor market. Given that unemployment is much higher for young people in all OECD countries, we wonder whether unemployment can be reduced by looking at job-finding channels as a possible source of matching. This analysis highlights the influence of individual characteristics and the socio-spatial environment on the probability of being employed.

We postulate that *(i)* there are different matching problems and heterogeneous job opportunities for different groups of individuals, according to their characteristics; *(ii)* matching problems due to incomplete or asymmetric information may be reduced by the use of networks. An originality of this study is to allow for selection bias due to unemployment. We estimate a multinomial model associated with job finding, controlling for selectivity, by adapting Van De Ven and Van Pragg (1981)'s two-step estimation procedure.

In the first step, we model the probability of being employed. The results confirm some well-known features such as the effects of education and gender. Women, low educated people and SUZ inhabitants suffer more from unemployment. We also find that the less skilled the parents, the smaller the probability of the children being employed. We also

show that French immigrants' children suffer the most from unemployment, even more than the non-French. In France, it is easier for young people with French parents to be employed.

In the second step, we estimate the probability of getting a job through a given job-finding channel. A first set of original results concerns the specificity linked to individual characteristics. Women are more likely to find a job through direct application, whereas they are less likely to find a job through social and school networks. Better-qualified people benefit more from school networks and do not find jobs through public agencies or social networks : this result is in keeping with (Kramarz and Skans, 2014)'s conclusion that weak ties help people with higher qualifications. However, the less qualified are more likely to find a job through their social network.

A second set of original results is related to the socio-spatial characteristics. People living in SUZ are more likely to find a job through school networks or public agencies. Note that these two channels are sensitive to public policy : it seems that when people have difficulty in finding a job through their individual information channels (direct applications, social networks, etc.), the state still has an important role to play.

When comparing the situation in rural and urban areas, we find a higher effect of social and school networks in urban areas. Conversely, the four other channels are more frequently used in rural areas to find a job. Note the importance of school networks for Parisians living in SUZ : this may be related to a deliberate public policy, helping people from sensitive areas to gain access to prestigious educational institutions. It may also be explained by a heavy concentration of educational institutions and polycentric economic agglomeration in the Ile de France (Paris) region.

It is clear that young people can be helped to find jobs by helping them to use different channels of job-finding. There is a need for public policies to encourage young women, less-educated youth and immigrants' children to mobilise the right channels, *i.e.*, the ones that give them the highest probability of getting a job. Young women and immigrants' children

should benefit more from school networks, while less-educated young people should benefit more from public agencies, whatever their place of residence.

"85% of your financial success is due to your personality and ability to communicate, negotiate and lead. Shockingly, only 15% is due to your technical knowledge", the Carnegie Institute of Technology recently declared. Clearly, helping young people or students to invest more in social capital could be a crucial tool in the fight against youth unemployment.



*"The third major assumption of the job-matching approach is that imperfect information exists on both sides of the market about the exact location of one's optimal assignment."*

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(Jovanovic, 1979)

# 3 Young workers-job matching quality : Evidence from France





### 3.1 Introduction

In the context of asymmetric information, Granovetter (1995) argues that the likelihood of achieving good matches depends on the choices of search methods from the job seeker's side or on the choices of recruitment channels from the employer's side. This chapter analyzes the role of institutional search channels (as formal) and social networks (as informal channels) on the young workers-job matching quality. There is a large body of empirical research focusing on obtaining estimates of the job access channel's effects on wage. Little is known about the returns to search channels on both monetary and non-monetary job attributes. Monetary job outcomes are mainly the job income, while non-monetary job outcomes are the level of satisfaction/dissatisfaction with the job - security, adequacy to own qualifications, working conditions, working hours - in addition to the contract type and tenure at the job.

In order to increase our understanding of this issue, we suggest in this chapter to answer to the following related questions : What factors play a significant role in explaining the probability of being dissatisfied with the job? When formal and informal channels have an advantage with respect to monetary and non-monetary job facets? Do these two mechanisms really affect differently the quality of an employment? In particular, does the frequently argued effect of networks, in terms of increasing the probability of finding jobs that endure, holds if we distinguish between social and school networks and if we concentrate our focus on youth employment?

Why are these questions interesting and important?

First matching quality matters for a number of policy issues including the study the human resources allocation in the labour market. Thus, knowing the impact of job search channels on different monetary and non-monetary job attributes is a key element to evaluate existing and designing efficient labour market policies. Many such policies aim to offer temporary (and often subsidized) work opportunities. These policies are based on the assumption that helping youth finding their first job will be the solution to reduce

unemployment so that the most important target would be the job in itself. It is true that skills are sufficiently enhanced while working and in order to be employable, individuals have to acquire some working experience. Thus the success of these policies depends on how these skills improve on-the job for the target population, and to what extent this skill enhancement can be fruitful and satisfying for the worker. In other manner, finding a job is a success in itself, in particular in a context of economic recession and high unemployment periods, yet, still the question of matching quality must be highlighted.

Second, placing greater emphasis on the quality of employment was also dictated by the evidence that better quality in work results in faster employment growth and higher productivity (European Commission. Communication from the Commission to the Council et al. (2003), p. 6-8), while it is also believed to contribute to the positive mental and psychical well-being of employees, thus serving as a precondition for a rich, satisfying, and productive life (Eurofound (2001), p. 7).

The contribution of this chapter is as follows. We first suggest different measures of the matching quality and estimate them simultaneously and recursively using French data-set, namely the "Enquête Emploi" (Insee, 2010). This procedure allows to handle with potential selection bias and for endogeneity of some explanatory variables. Thus the framework suggested leads first to an estimation of a 6-equation system controlling for selection : (1) the job access channel, (2) the potential working experience, (3) the contract type, (4) tenure at the current job (in months), (5) the determinants of dissatisfaction with the job and (6) the selection on employment equation.

Second, a 6-equation system is estimated including as dependant variables : (1) the job access channel, (2) the potential working experience, (3) the contract type, (4) tenure at the current job (in months), (5) wage regression, (6) the willingness to change the current job and (7) the selection on employment equation.

The estimation of the full models simultaneously (i.e, the estimation of an 8-equation system simultaneously - (1) the job access channel, (2) the potential working experience, (3) the contract type, (4) tenure at the current job (in months), (5) wage regression, (6)

dissatisfaction, (7) overall satisfaction with the current job and (8) the selection equation) - was very difficult and could not achieve convergence.

In line with initial expectations, we find that the social networks play a positive role on job security and both social and school networks play different roles on the job outcomes and satisfaction. It is plausible to conclude that, while school networks appear to provide temporary jobs (as a stepping stone to permanent jobs), social networks are synonymous of more durable employments compared to the other formal channels. Despite this positive effect of informal channels on job security and tenure, negative effects are noticed on wage and satisfaction with skills matching. With regards to the variable which captures the 2008-2009 recession effect, finding a job after the last recession implies lower satisfaction levels with the overall job facets rather than the job security.

The rest of the chapter is organized as follows : Section 2 reviews main theoretical and empirical contributions about search methods and their effects on the job matching quality. Section 3 describes the data-set and variables used in the econometric specification. Section 4 introduces the econometric approach used. Section 5 summarises the main findings and discusses their implications for future research. Last section concludes.

## 3.2 Literature Background

It is well documented in the literature that the use of social networks is very common as a large proportion of job seekers heard or got their jobs through friends and relatives (see Rees (1966); Holzer (1988); Granovetter (1995); Montgomery (1991); Topa et al. (2008) for U.S., Pissarides and Wadsworth (1994) for U.K. and Addison and Portugal (2002) for Portugal). However, several researches note also that social networks may lead to an increase in job-worker mismatch (Bentolila et al., 2010) and to less diversity on the social and professional scale. Petersen et al. (2000) argue that, while hiring through social networks is informationally efficient, this channel may, however, lead to less diversity than desirable since employers may find out, ex-post, that their hires are socially and

professionally too similar. Hence, the authors emphasize the idea that if an employer aims to have different viewpoints and promote creativity, then relying less on networks and more on other hiring methods may lead to better outcomes. Fontaine (2008), providing a simple matching model, investigates how networks can affect labor market outcomes by increasing the job arrival rate of workers. Hence, according to the author, while firms reduce their search costs, workers end up with a decrease of the number of vacancies. However, the author bypassed the study of cases where networks can generate a mismatch between heterogeneous workers and heterogeneous occupations.

Moreover, the empirical literature about the effects of social networks on the matching quality has produced mixed results so far. Some studies find positive wage effect (e.g. Simon and Warner (1992) ; Marmaros and Sacerdote (2002) ; Loury (2006)), while others find negative effects on wages (see, for example Pistaferri (1999) ; Bentolila et al. (2010) ; Goel and Lang (2009)). These effects of social networks are not limited to wages. To the extent that informal networks lead to better matches may well result in lower separation rates (Margolis and Simonnet (2004) ; Dustmann et al. (2015)), and thus to higher employment stability. Cahuc and Fontaine (2009) develop a theoretical model on the relative efficiency of formal and informal search channels and show that social networks represent an inexpensive, though, inefficient search method, while posting a job advert in newspapers or contacting a private employment agency is more efficient and more costly.

Granovetter (1973) stressed on the relevant role played by weak ties as the network's most important information channel. As a consequence, social networks tend, according to the author, to provide job seekers with better matches and higher wages. Franzen and Hangartner (2006), using data on 8000 Swiss university graduates, provide some contrasting findings to Granovetter's hypothesis (1973 & 1974) and show that using social contacts is only helpful with respect to important non-monetary job characteristics (better career perspectives and adequacy). Franzen and Hangartner (2006) conclude that, although social networks seem to be associated with lower job search costs and higher non-monetary attributes, the hypothesis according to which social networks provide better wages is not

supported by the authors. Young university graduates who receive their jobs through social networks are more likely to get jobs which are adequate to their educational degree and which offer them better perspectives. Dustmann et al. (2015), using matched employer-employee data combined with survey data linked to administrative records, find evidence that workers in Germany earn higher wages and are less likely to leave their firms if they have obtained their job through a referral. The trends noticed, show particularly strong effects at the beginning which tend to decline with tenure in the firm. The authors suggest that firms and workers learn about workers' productivity over time. Overall, their findings suggest that job search networks help to reduce informational deficiencies in the labor market and lead to productivity gains for workers and firms.

Now since, "it is unclear whether these contrasting systems differ dramatically in efficiency" (Granovetter, 1995), studying the effects of both formal and informal channels on monetary and non-monetary job facets is still questionable. Differently from the studies evoked earlier in this chapter, network linkages here, are observed through the distinction between social and/or professional contacts and the school network for two reasons. First, we postulate that workers use networks differently depending mainly on their individual characteristics and socio-demographic environment (nationality, origins and occupation of their parents as well as their residence area). Second, the reason we consider two different types of social networks is that the effect of some variables, such as the education level, might be diluted if we gather the professional contacts and the school ones. We hypothesize that these two different types of networks also affect differently the job attributes.

## **3.3 Data and Descriptives Statistics**

### **3.3.1 Data**

Same data provided by "Enquête Emploi" Insee 2010 are explored here as a continuity to the previous chapter. It is to mention that the proportion of missing observations is

considerable for some variables such as the monthly wage or the dissatisfaction from the current job (not dissatisfied).

Since, we noticed that the number of observations has drastically reduced for the private employment agency channel (when estimating our models), we choose to gather the public and the private job centres in one option that we call "jobcentres" (as formal intermediates). As a result, the access channel becomes coded : 1 if direct procedues (send applications or respond to job ads, as formal), 2 if social networks (relatives, professional, as informal), 3 if school networks (as informal too), 4 if job centres (as formal) and finally 5 if other channels (including job examinations, as formal).

Second, it is important to mention that there are no questions asking directly individuals whether they are satisfied or not with their current job. However, we use two variables as subjective indicators of the job mismatch : "the reason of searching for a new job as a replacement to the current one" as well as "Do you desire a new job as a replacement to the current one".

### 3.3.2 Descriptive Statistics

Tables 3.1 and 3.3 show some descriptive statistics of the sample of the young employed workers considered in this analysis (individual characteristics, the highest education level achieved, the job access channel through which the individual obtained his current job, the proportion of young workers who answered to the different job-match indicators (satisfaction, willingness to change, tenure, the contract type and the wage), the period of entry to the current job (before or after the 2008-2009 economic recession) and the working experience.

As shown in Table 3.1, the share of people who found a new job through the social networks goes from 21.97% if they used personal or professional contacts to 6.75% if they used school contacts. These results do not reflect how many job seekers actually used the social networks at any point during their job search, but only more conservatively reflect

TABLE 3.1 – Variables Description

	All sample	Sample of dissatisfied workers
<b>Nb observations</b>	49.833	5.215
<b>Women</b>	46.45	51.62
<b>Employed</b>	85.01	100
<b>Unemployed</b>	14.99	-
<b>Access channel</b>		
Direct applications	53.10	51.86
Social network	21.97	26.71
School networks	6.75	3.56
jobcenters	8.14	11.40
Other channels	10.03	6.47
<b>Desirability of a job change</b>	-	11.91
<b>Education level</b>		
<Bac	38.91	36.51
Low education (Bac)	26.23	27.01
Average education (Bac+3/4)	15.60	15.12
High education (Bac+5)	19.26	21.35
<b>Contract type</b>		
Permanent	65.35	51.79
Fixed-term	21.35	32.1
Temporary job	13.3	16.11
<b>Dissatisfaction reasons</b>		
Job security	-	18.54
Job does not fit qualifications	-	28.24
Working hours	-	4.10
Working conditions	-	3.56
Wage	-	26.41
Any other	-	19.14

Source : Enquête Emploi Insee 2010 (author calculation). Weighted statistics.

the number who learned about the job through the social networks and chose to sign a contract with the employer through this channel.

Table 3.1, shows that among those who are employed, 11.92% desire a new job as a replacement to the current one and, thus, are dissatisfied with their current job. We also have information on the job search channels they are currently using to find a new job and the search intensity (measured by the number of search channels used).

TABLE 3.2 – Variables description (continued)

	Sample of satisfied		Sample of dissatisfied		Combined	
	Observations	Mean	Observations	Mean	Observations	Mean
Monthly wage	12435	1365.654*** (667.19)	2284	1126.584*** (549.68)	14719	1328.557*** (656.07)
Tenure (in months)	33751	35.67*** (32.02)	4124	29.37*** (28.68)	37875	34.98*** (31.73)
Experience (in years)	33270	5.05*** (3.56)	4708	4.67*** (3.54)	37978	5.00*** (3.56)

The Two-sample (those who are not satisfied and those who are satisfied) t-test with equal variances was run for wage, experience and tenure at the current job and the computed test was significant at 1% for these 3 variables.

Source : Enquête Emploi Insee 2010 (author calculation).

When they were asked about the reason why they want a new job, the greatest proportion of them said they want a new job which fits better their abilities. The second reason was their current wage, as 26.41% of the on-the-job seekers declare their intention to find a better-paid job and 18.54% feel afraid of losing their current job. It is well to mention that among the full sample, an important proportion of young workers are hired for fixed-term contracts (21.35%) and temporary jobs 13.3% .

Table 3.3 shows that while more male workers found their current job through the social networks, a large share of female employees find their jobs by responding to newspapers and direct applications.



An additional interesting result is that school networks job finders are on average slightly better educated than those who found a job through their social network (see also Table B.6 in the appendix). This result confirms previous findings already emphasized in the literature, as the less educated are more likely to benefit from their social networks as a major source of finding an employment. Among those who had a job just before the current one, 26.67% of them found their job through social networks. The share of the formerly unemployed workers who used the same channel is 21.82%. While almost 2% of the formerly employed or unemployed youth find their job through school networks, 13% of the recent graduates find their jobs through this channel.

TABLE 3.3 – Descriptive statistics

Access channel	Gender		Anterior situation			By age and tenure	
	Men	Women	Student	Unemployed	Employed	Mean age	Mean tenure
Direct applications	50.18	56.38	51.48	53.64	54.69	25.38	36.33
Social network	25.61	17.89	17.99	21.82	26.67	25.24	36.56
School networks	6.83	6.67	13.3	2.06	1.67	24.59	40.65
Agencies	7.78	8.55	4.06	17.43	7.91	25.88	31.05
Other channels	9.60	10.52	13.18	5.06	9.05	26.59	47.72

Source : Enquête Emploi, Insee, 2010. author calculation. Weighted statistics.

These differences in terms of providing access to employment between formal and informal channels are interesting suggesting some intuitions to test empirically. Notably do gender, education level and past labor market status play significant roles on the efficiency of these channels?

The analysis of the descriptive statistics gives several new insights into the different factors influencing the job access channel's efficiency, the job outcomes (satisfaction, contract, wage and tenure) and suggest that their determinants are may be interrelated. Hence, the next discussion will consider the influence of all independant variables on the five dependant variables stepwise. However, special concern is placed on the impact of the job access

channel as an endogenous determinant of objective and subjective job facets.

## 3.4 Econometric Methodology

The main purpose of this chapter is to provide new evidence concerning the impacts of formal and informal channels on the different job outcomes after providing access to employment. In order to examine this, we first investigate the determinants of the probability to find a job through a given job access channel (may it be formal or informal).

Differently from the previous chapter where the formal employment intermediates were disaggregated, here both private and public agencies are assembled into one alternative simply called "job centres". We opted for this alternative since we faced a problem of a small number of observations while estimating all the other models describing the job-matching measures.

This approach could be also interesting in order to provide evidence related to the impact of the formal channel (institutional employment intermediates, may it be public or private) on different job outcomes compared to the other informal channels that is direct applications, social networks and school networks.

The next paragraph describes our estimation strategy concerning the job-matching quality proxies. Recall that these latter can be objective and subjective measures. The estimation strategy proceeds stepwise.

### 3.4.1 Objective measures of matching quality

There are several different approaches to measure the quality of a job match. One approach is to use objective indicators of the employment quality. In this analysis, the objective job attributes are mainly three : the contract type, wage and tenure at the current job.

Concerning the contract type, it could be either (1) permanent, (2) fixed-term or (3) temporary. Particularly, we are interested into what extent social networks can affect positively the probability of finding permanent rather than "atypic" contracts (i.e., fixed-term and temporary).

The second objective indicator of matching quality is the job tenure. This latter is described by our data as the number of months the individual has been working for the same current employment (firm).

Finally, wage is the third objective indicator of matching quality. This monetary outcome is estimated using as a dependant variable the log of monthly wage. At this level, it is noteworthy to explain how the monthly wage is constructed.

First, the net hourly wage must not be less than 6.8 euros/hour worked (hourly wage= Monthly wage/Nb monthly hours) otherwise it is under the minimum legal wage. For this reason some modifications need to be highlighted. First, concerning the observations for which the number of working hours are 0 while the individuals have a job, we replace missed wages by the redressed monthly wage (reported at the end of the survey).

Second, as we compare reported monthly wage and the redressed monthly wage, we construct a ratio (reported/redressed) such that if this latter is higher than 1.04 or lower than 0.96, then here again, we replace the monthly reported wage by the redressed one.

Finally, the wage equation is estimated where the dependent variable is the log of the monthly wage. The estimation takes into account the selection problem (selection equation where the dependent variable is a dummy coded 1 if the wage is available and 0 otherwise).

Using individual-level data, these three objective indicators allow us to investigate the relationship between the job finding channel (formal and informal) and the job matching quality. However, measures that rely on job tenure, for example, assume that "good matches endure" (Bowlus, 1995), which is often but not necessarily true. Another approach is to use wages as an indicator of match quality (see Simon and Warner (1992) or more recently Van Ours and Vodopivec (2008)). Nevertheless, wage is generally fixed at the recruitment step, and imperfect information is likely to induce uncertainty about the job match quality

ex-ante (Mang, 2012). Moreover, wage is an objective indicator which does not usually reflect the quality of a "good" match.

For this purpose, in addition to these objective indicators (i.e., wage, contract type and job tenure), other subjective variables are also considered as indicators of the job-matching quality. Their description is detailed in the next paragraph.

### 3.4.2 Subjective measures of matching quality

Specifically, the subjective indicators that are considered in this analysis are two. The first indicator is an employee's motivation behind his desire to change his current job. It is a polytomous variable taking 7 values but the choice is exclusive and these options are the following : job security <sup>1</sup>, skills mismatch, dissatisfaction with working hours, dissatisfaction with working conditions, dissatisfaction with wage and dissatisfaction with distance to work.

Since this first indicator is a discrete choice variable limited to the choice of one unique alternative, we estimate it using a multinomial Probit model.

The second subjective indicator is the intention (yes or no) to find a new job as a replacement to the current one. This latter dummy variable is assumed to capture the overall dissatisfaction with the job. It is coded 1 if the worker wants to find a new job as replacement to the current one and 0 otherwise, thus, is estimated using a probit model.

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1. Job security : According to the OECD, this indicator presents the probability to become unemployed. France is ranked 27 with a job security rate equal to 6.4%, 5.4% on average OECD, 3.2% for Germany(5th) and 2.8% for Switzerland (1st). This indicator is calculated as the number of people who were unemployed in 2013, but were employed in 2012 over the total number of employed in 2012. Source : OECD calculations based on the OECD Labour Force Statistics microdata, Better Life Index, edition 2015. <http://stats.oecd.org/Index.aspx?DataSetCode=BLI#> (last visit 30/03/2016).

### 3.4.3 Modelling strategy

We suggest a simultaneous estimation of both objective and subjective measures of the matching quality. This estimation strategy can be used in cases where there exists endogeneity of some explanatory variables. The model is then estimated by maximum likelihood simulated using the conditional (recursive) mixed process estimation suggested by Roodman (2011). "Mixed process" means that different equations can have different kinds of dependent variables. The Conditional (recursive) Mixed Process model can fit many SUR, simultaneous equation, and IV models. It goes beyond them in offering far more flexibility in model construction.

Thus the framework suggested leads first to an estimation of a 6-equation system controlling for selection : (1) the job access channel, (2) the potential working experience (age-schooling-6), (3) the contract type, (4) tenure at the current job (in months), (5) the determinants of dissatisfaction with the job and (6) the selection on employment equation.

Second, we estimate the second system consisting of 7 equations and including as dependant variables : (1) the job access channel, (2) the potential working experience, (3) the contract type, (4) tenure at the current job (in months), (5) wage regression, (6) the willingness to change the current job and (7) the equation of selection on employment<sup>2</sup>.

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2. The estimation of the full models simultaneously (i.e, the estimation of an 8-equation system simultaneously - (1) the job access channel, (2) the potential working experience, (3) the contract type, (4) tenure at the current job (in months), (5) wage regression, (6) dissatisfaction, (7) overall satisfaction with the current job and (8) the selection equation - was very difficult to be conducted and convergence could not be achieved.

The first simultaneous and recursive system we want to estimate is the following :

$$\left\{ \begin{array}{l} Access_i = F(X_{1i}\gamma_1) + \epsilon_1 \\ Exper_i = F(X_{2i}\gamma_2) + \epsilon_2 \\ Contract = F(Access_i, Exper_i, X_{3i}\gamma_3) + \epsilon_3 \\ Tenure_i = F(Access_i, Exper_i, X_{4i}\gamma_4) + \epsilon_4 \\ Dissatisf_i = F(Access_i, Exper_i, Contract_i, Tenure_i, X_{5i}\gamma_5) + \epsilon_5 \\ Emp_i = F(Z_i\gamma_6) + \epsilon_6 \end{array} \right.$$

let  $Access_{ij}$  indicates if the individual " $i$ " found his current job through the channel " $j$ " (direct applications, social networks, school networks, job centres and any others);  $i = 1, \dots, N$  and  $j = 1, \dots, 5$ .

let  $Exper_i$  gives the number of years of experience of the individual " $i$ ".

$Contract_{is}$  describes if the individual " $i$ " has a contract of type " $s$ ";  $i = 1, \dots, N$  and  $s = 1, 2, 3$ .

$Tenure_i$  is the tenure in months at the current job for the individual " $i$ ".

$Dissatisf_{ik}$  describing when the individual " $i$ " wants to change his current job for the reason " $k$ ";  $i = 1, \dots, N$  and  $k = 1, \dots, 6$ . Since we have 6 dissatisfaction reasons, the model we estimate tries to identify the determinants of the probability that a worker " $i$ " wants to leave his current job for the reason " $j$ ".

let  $Emp_i = 1$  if the individual " $i$ " is employed,  $Emp_i = 0$  otherwise;  $i = 1, \dots, N$ . This is considered as the selection variable.

Let  $X_1$  be a set of explanatory variables of Access. Additional explanatory variables for "access" are : Age, the nationality (according to the parents : 4 alternatives see previous chapter), the parents' occupation, the place of residence : level of sensitivity(4 alternatives see previous chapter) and rurality (4 alternatives see previous chapter).

Let  $X_2$  be the set of explanatory variables of the working experience for an individual  $i$ . Additional explanatory variables of "exper" : Age and living in an urban area.

Let  $X_3$  be the set of explanatory variables of Contract. Additional explanatory variables of "Contract" is the previous situation (inactive, employed or unemployed).

Let  $X_4$  be the set of explanatory variables of the job tenure at the current job. Additional explanatory variables for "Tenure" are : Age and living in an urban area.

Let  $X_5$  be a set of explanatory variables of the different dissatisfaction reasons. Additional explanatory variables for "Dissatisf" are : working in public sector (yes or no), management responsibility (if any), entry after 2008 to the job and the industry sector (10).

Let  $Z$  be a set of explanatory variables of being employed. Additional explanatory variables for "Emp" are : the housing type and the parents' occupation.

Each of these equations include a common set of exogeneous explanatory variables which are individual-level covariates, including gender interacted with having children if any, nationality (French or Not), living with partner, and the education level.

The second simultaneous and recursive system we want to estimate is the following :

$$\left\{ \begin{array}{l} Access_i = F(X_{1i}\beta_1) + \epsilon_1 \\ Exper_i = F(X_{2i}\beta_2) + \epsilon_2 \\ Contract = F(Access_i, Exper_i, X_{3i}\beta_3) + \epsilon_3 \\ Tenure_i = F(Access_i, Exper_i, X_{4i}\beta_4) + \epsilon_4 \\ \ln(Wage)_i = F(Access_i, Exper_i, Contract_i, Tenure_i, X_{5i}\beta_5) + \epsilon_5 \\ Overallstatisf_i = F(Access_i, Exper_i, Contract_i, Tenure_i, \ln(Wage)_i, X_{6i}\beta_6) + \epsilon_6 \\ Emp_i = F(Z_i\beta_7) + \epsilon_7 \end{array} \right.$$

Where  $\ln(wage)_i$  is the log of the monthly wage for the individual "i".  $X_5$  be a set of explanatory variables of the monthly wage. Exclusive explanatory variables to "lnWage" are : working in public sector (yes or no), management responsibility (if any), entry after 2008 to the job, the industry sector (10), previous situation (inactive, employed or unemployed), region of residence (22).

Let  $Overallsatisf_i$  reflects whether or not the worker " $i$ " is willing to change his current job. Exclusive explanatory variables to "Overallsatisf" is whether or not the last job change was involuntary.

Each of these equations include a common set of exogeneous explanatory variables which are individual-level covariates, including gender interacted with having children if any, nationality (French or Not), living with partner, and the education level.

The estimation strategy lies in the mutual interdependence of these variables which justifies the coherence of the system of equations which they jointly constitute. In one hand, this dependance is due to the fact that dissatisfaction (with job security, skill adequacy, working conditions, working hours, wage, others (including distance to work)) is explained by the job access channel (direct applications, social networks, school networks, jobcenters, others), the contract type (permanent, fixed-term, temporary) and job tenure (in months). In the other hand, both the contract type and the job tenure are assumed to be function of the job access channel among other additional predictors.

Moreover, job tenure is potentially endogenous as higher or less seniority at the job might be explained by unobservable characteristics. Job tenure at the beginning of the career is not expected to be high, since young workers are looking for a better job as they have, nowadays, easier conditions for mobility, even at the geographical level. In addition, a selection equation has been also integrated in the model in order to control for selection on employed workers.

An additional explanatory variable suspected to be endogenous is the potential working experience ( $age - schooling - 6$ )<sup>3</sup>. However, Identifying the return to experience (Comparing the dissatisfaction, contract type and job tenure and wages of workers with different levels of experience) is known to provide biased results (see, for example, Altonji and Sha-

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3. Potential working experience often measured as  $age - schooling - 6$ , is assumed to be measured with error. If experience is endogenous, then it is replaced by its predicted value as an explanatory variable.



kotko (1987), Altonji and Williams (2005) and Topel (1991)) for at least two reasons. First, because some of the differences may be attributed to better matches achieved by workers who have been in the labour market longer. Second, because high-ability workers are likely to have a stronger labour market attachment and hence end up with more experience (Dustmann and Meghir, 2005).

If the exogeneity assumption of these variables is rejected we can conclude that several unobservable individual characteristics (like the willingness to have a better professional career motivated by remaining for longer period at the job, or a better quality of search channel) that affect the job access channel or the job outcomes, also affect the wage. If these variables are endogenous, then we have to respect the identification : at least one variable is specific to each equation. In our case, exclusion restriction is respected at each level (selection and endogeneity). Age is used as a strong instrument, to experience and job tenure (high correlation, test of instrument validity verified and age is not included in the contract type and dissatisfaction equation) (Card, 1999). For the contract type, we use as an instrument the past labor market status (inactive/training, unemployed or employed) while instruments for the job access channel are the place of residence and the parents' occupation.

A downside of this approach is that the level of satisfaction on the job is not detailed, as the survey questionnaire suggests one possible option of the dissatisfaction reason unfortunately, not allowing us to have different alternatives per respondent (If this was possible, then we would have used a multivariate model for dissatisfaction in order to investigate the preferences for monetary and non-monetary job attributes). The third reason is that, one would prefer more precise data which span more than one period in order to provide more accurate conclusions. Nevertheless, the presence of the variable which captures the entry year to current firm provided us an angle to tackle the potential effect which would occur after the last recession period (2008-2009) on all job-matching measures.

## 3.5 Empirical Results

Based on the methodology described in the previous section and in the previous chapter, we outline here the job access channel's effect on the utility from work among young employees in France. The following sections discuss the estimation results stepwise.

### 3.5.1 Job Access Channel's Efficiency in Providing Access to Employment

Here, the dependent variable is the job access channel and the model estimated is a multinomial probit model (since the dependent variable is categorical and the choice is exclusive to one alternative among direct applications, social networks, school networks, job centres and any other procedure) controlling for selection on employment.

Selection is due to the fact that restricting the sample to the only occupied workers may generate sample selection bias. We have then to test for the selection and to correct for it (when it occurs). In fact, the employability is not a random phenomenon, given that there could be a selection at the hiring process based on several observable and unobservable characteristics.

Taking into account the selection problem induces the use of a control function approach. We adapt the (Van De Ven and Van Pragg, 1981) two-steps estimation procedure for a probit with a selection to our case of multinomial model with selection. In the first step, we model the likelihood of being employed, depending on a set of exogenous explanatory variables using a *probit* model.

Estimation results are reported in Table 3.4 (for additional results, see Table B.9 in the appendix).

Concerning the influence of education, we find mixed effects on the impact of the informal channel which is in line with the results in the previous chapter. While education increases the probability of finding a job through school networks, a negative effect is

observed for both social networks and formal intermediates. This result highlights the important role played by school pairs and French universities through the organisation of job fairs, career days and strengthening the influence of alumni. In line with initial expectations, the less-educated are likely to benefit the most from their social networks rather than the jobcenters.

Looking at the gender effect, we show that women are more likely to find a job through jobcenters rather than direct approaches (i.e, direct applications and job ads). However they benefit less from social networks compared to men. This effect has been already highlighted in the previous chapter. This finding also comforts the previous empirical and theoretical contributions related to the gender effect (see Petersen et al. (2000)).

Since leaving the school system can be done after a long duration of schooling (sometimes above 25 years old), this implies some consequences on the access to employment for youth. First, we must emphasize the important role of age and the education level as determinants of youth employability. It is noteworthy to mention that the first entry into the labor market is a difficult long process for youth and this depends on their search strategy. If we look at the result highlighted previously, then the argument discussed here might be an explanation of the age effect. However, school networks appear to be less helpful for the eldest compared to the youngest who are more connected to their academic contacts through participation in job fairs and open days. The youngest also benefit from the growing influence of the alumni network in addition to the partnerships between their training institutes and several firms.

Younger job seekers benefit more from their school networks because of their recent exit from the education system. This positive effect tends to diminish accross age. However, we should expect to find a positive effect for the eldest job seekers on the probability of using social networks to find their jobs. These individuals are supposed to have more working experience and had enough time to create a social network of family, friends, relatives, acquaintances, previous employers, etc., compared to the youngest.

As the results give new insights into the disparities among the determinants of successful

TABLE 3.4 – The determinants of the job access channel

Access channel (Ref.Direct application)	Social net	School net	jobcenters	others
Age	0.007**	-0.049***	0.037***	0.060***
	2.03	-10.30	8.38	12.89
Women	-0.241***	-0.081**	0.034	-0.254***
	-9.14	-2.35	1.06	-7.94
<b>Nationality (Ref.Native French)</b>				
One parent is French	0.141***	0.200***	0.153***	-0.018
	3.16	3.55	2.85	-0.32
Both parents are French	-0.021	0.032	-0.042	-0.095
	-0.43	0.49	-0.70	-1.54
None is French	0.421***	0.168**	0.099*	-0.183***
	9.07	2.59	1.68	-2.87
<b>Education (ref. not educated)</b>				
Low education	-0.167***	0.168***	-0.140***	0.196***
	-5.80	4.16	-3.90	5.24
Average education	-0.324***	0.324***	-0.196***	0.032
	-8.98	6.85	-4.48	0.69
High education	-0.289***	0.427***	-0.044	0.700***
	-7.45	8.52	-0.95	15.92
Observations		33436		
Log likelihood		-40617.24		
Wald $\chi^2(160)$		4047.83		

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%.

Note : Reported estimates are coefficients of each variable's effect on the probability of finding a job through a given access channel. We also control for the occupation type (10 options), place of residence characteristics (dummies for region and rurality/poverty rate).

Source Enquête Emploi Insee 2010. Author's calculations (Unweighted estimates).

search channels, the discussion which follows will consider the influence of networks in addition to other explanatory variables on job outcomes and satisfaction. Special emphasis is placed on the impact of access channels on monetary and non-monetary job attributes.

### 3.5.2 Drivers of Job Satisfaction as Proxies for Matching Quality

In this part of the chapter, an analysis of various facets of the job is undertaken rather than only considering a dummy variable capturing whether or not the worker is satisfied. This follows the argument that aggregate job dissatisfaction is likely to reflect the commixture of partial dissatisfactions with various features of work. Hence, the dependant variable here is the reason of dissatisfaction with the current job, and it is coded : 1- for job security (reference category), 2- for looking for better carrer prospects, 3- for working hours, 4- for working conditions, 5- for salary and 6- for other reasons (including distance or move to another region). Since the choice is limited to one alternative (exlusive), so here again, the model estimated is a multinomial probit controlling for selection and for the endogeneity of the job access channel.

The model is explained by socio-demographic characteristics as well as information about the current job (industry, tenure, sector : public/private) but also the job access channel through which the job has been found. Tenure, contract type and experience are included as potential endogenous predictors of dissatisfaction. Results are reported in Table 3.5 (and, for more results, it continues in Table B.10 in the appendix).

Satisfaction with the job adequacy to own abilities is one factor of the employment's quality. The capacity of job satisfaction to serve as an indicator for a good or a poor job match quality is acknowledged by only few studies. It is noteworthy to mention that a number of studies argued that job satisfaction tend to be significantly enhanced after a job change (Akerlof et al. (1988) ; Van der Velde and Feij (1995) ; Swaen et al. (2002)). This is in line with the aim of what McCormick et al. (1979) call the "gravitational hypothesis". The authors argue that, "Gravitation is about movement or change, and the gravitational

TABLE 3.5 – Reasons for dissatisfaction with the current job

Ref. Job security	Skills mismatch	Work.hours	Work.condit	Salary	Distance
Women no child (ref. Men no child)	0.047	0.281**	0.383***	-0.231***	0.003
	0.78	2.22	2.94	-2.95	0.04
Women & child (ref. Men no child)	-0.134	0.499***	0.173	-0.320***	0.012
	-1.42	3.07	1.02	-2.77	0.09
Men & child (ref. Men no child)	-0.189*	0.142	0.186	-0.217*	-0.280*
	-1.90	0.82	1.15	-1.78	-2.00
Low education (ref. no diploma)	0.133*	-0.086	-0.022	0.104	-0.175
	1.70	-0.60	-0.16	1.08	-1.65
Average education (ref. no diploma)	0.100	-0.296	-0.172	-0.028	-0.293**
	0.95	-1.53	-0.89	-0.22	-2.07
High education (ref. no diploma)	0.304**	-0.553**	-0.174	-0.114	-0.328**
	2.42	-2.55	-0.84	-0.80	-2.13
Fixed contract(ref. permanent)	-0.504***	-0.865***	-1.167***	-0.797***	-0.652***
	-4.44	-5.82	-6.61	-7.22	-5.85
Temporary contract (ref. permanent)	-0.376**	-1.192**	-0.734**	-0.880***	-0.568**
	-2.05	-2.77	-2.36	-3.72	-2.55
Social Networks (ref. direct application)	0.730***	0.763***	0.609***	0.614***	0.522***
	7.07	5.68	4.52	5.51	4.62
School Networks (ref. direct application)	0.991***	0.836**	1.093***	1.095***	1.149***
	5.03	2.28	3.69	4.34	5.01
Job centers (ref. direct application)	0.968***	1.070***	0.962***	0.820***	0.788***
	6.63	6.20	5.43	5.75	5.46
Other (ref. direct application)	0.380**	0.485*	0.375	0.747***	0.786***
	2.36	1.92	1.46	3.63	3.82
<b>Entry &gt; 2008</b> (ref. entry before 2008)	2.579***	2.240***	2.145***	1.985***	2.002***
	14.04	10.51	9.93	15.64	13.50
<b>Job tenure</b> (in months)	0.061***	0.050***	0.053***	0.046***	0.047***
	15.43	11.22	12.40	18.05	15.36
Observations	5320				

Notes : Reported results are coefficient estimates. Z values are reported under each coefficient. We also control for the industry type (10 options), a dummy for being non French, living with partner, team manager, and living in urban areas.

Source : Enquête Emploi Insee 2010 (author calculation). Unweighted estimates.

hypothesis is about movement that leads to improved match between worker ability and the cognitive demands of the work<sup>4</sup>. McCormick et al. (1979)'s assumption focuses on asking whether or not workers tend to gravitate to a job which matches their skills and aptitudes.

Hence, the match between both worker cognitive skills and employment cognitive requirements must be studied. We assume that an important predictor is the channel through which the worker found his job. Our results show that workers who found their jobs through social or school networks are more likely to exhibit increase probability of dissatisfaction with their job's adequacy to their qualifications. This finding comforts other empirical results showing that social networks are more likely to increase job mismatch (Bentolila et al., 2010). This means that the information transmitted through the network about the job task may not necessarily match the abilities of the job seeker. Similar effects are noticed regardless of the access channel, as compared to direct applications. This simply means that people who found a job using direct procedures (either directly contacting the employer or responding to job adverts) are more prone to exhibit higher probability of satisfaction with their skills matching (The opposite is true for the reference category : job security).

Therefore, looking at the stage of the family life cycle in which a person is situated<sup>5</sup> reflects interesting tracks. We use an interaction of two dummies : gender and having children (if any) as well as a dummy for living with partner. It appears that fatherhood increases significantly the probability of being satisfied with the job's adequacy to own qualifications, compared to men without children. This means that, for male workers without dependant children, in the beginning of one's career, a job that is enough for maintenance of one's physical needs and provides some degree of opportunity of skill improvement may

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4. Source : <http://psychology.iresearchnet.com/industrial-organizational-psychology/individual-differences/gravitational-hypothesis/> (Last visit 02/02/2016).

5. Research has shown that it can be reflected by the marital status (with partner) and the number and age of dependent children (Fasang et al., 2007).

be deemed appropriate although less satisfying. In contrast, with growing maturity, new needs and responsibilities arise because of the family unit, such as home purchase, care for dependent children (including subsequent investments). That's why compared to parenthood those who do not have children can afford to be more demanding toward their job's prospects.

A clear relationship with the highest education level is noticed as significant differences in the subjective evaluation of jobs are found among those who have different human capital characteristics. The "education paradox", whereby the highly-educated people tend to be less satisfied with the job's adequacy to their skills as compared to those with fewer abilities, is confirmed here. This result could be explained by the comparison with similar workers and differences in job quality across individuals with a similar level of education. However, the highly-educated are less prone to complain about the working hours. This means that if an individual who has may be encountered a career transition to less skill-demanding task, then this would be possibly synonymous of better working conditions, hours and even higher wages. This simply means that workers who may use fewer skills in their current jobs are significantly more satisfied with their job's adequacy to their abilities rather than with job security. If the reason why an individual chooses to change his current job is the desire to find a new one which better matches his qualifications, it is reasonable to assume that respondents tend to choose the response category "job adequacy" rather than for reasons of social desirability. This could explain the significant negative effect of lower and higher education on the probability of satisfaction with job's adequacy to own's ability.

The results for satisfaction with the "skills mismatch" underline that skill adequacy is an indicator for an upward or downward trend of a "good match". A possible interpretation would be that if skills required do not match the worker's aspirations after a job change or during a first experiment, then this tends to lower satisfaction with the job for the highly-educated people. Our findings emphasize the idea that while referral hiring is more prone to enhance the probability of a job mismatch, the most popular channel (direct



applications) is still the most efficient channel with regards to better job adequacy after a match. While school and social networks are synonym of more durable employments, the "direct" channel (direct applications and responding to job adverts) is likely to provide less job security.

Results reported in Table 3.5, show also the effect of the access channel on the willingness to leave the job because of the monetary job facet (dissatisfaction with wage). Our findings underline that social networks increase the probability of being dissatisfied with the perceived salary at the current job. However, once the occupation type and the job tenure (in months) are included in the determinants of the job dissatisfaction model, then the differences among the formal and informal channels vanish. The theoretical evidence has proven that there are two main mechanisms through which social networks are predicted to lead to higher initial wages. First, social networks are used by employers as a screening device for the worker's unobserved productivity, based on the belief that current workers tend to refer others who are similar to themselves (Saloner (1985); Montgomery (1991); Galenianos (2014); Cappellari and Tatsiramos (2015)). Second, referrals can inform workers and firms about the quality of the match (Simon and Warner (1992); Dustmann et al. (2015); Brown et al. (2012)), but there may be also negative effects of social networks. In fact, workers may rely on this informal channel as a last resort, which can be associated with low wage offers due to limited access to job opportunities through other channels (Loury, 2006).

Therefore, compared to the job security component, we notice that having a fixed or temporary contract has a significant positive influence on reported satisfaction with the different job facets. Hence workers who know that they have to quit their jobs after a definite period of time, are more concerned with the job security indicator since what they fear the most is losing their current job. Having a temporary or "atypic" job exposes the individual to high unemployment probability. This means that, while policymakers emphasize the importance of apprenticeships and temporary contracts for youth as crucial tools to provide them with enhanced working experience as well as opportunities to be

hired durably at the firms, our findings suggest, however, that these contracts do not seem to induce their expected effect. An alternative explanation could be that workers who express dissatisfaction toward the security of the current employment are may be moving for a permanent employment in another firm. This is in line with Booth et al. (2002) who find that, though undesirable, temporary jobs are stepping stones to better jobs.

It is comforting to notice that, in line with initial expectations, both instability and uncertainty associated to temporary jobs, lead to lower job satisfaction compared to the permanent employment. Overall, this result suggests that the recent concerns about the negative effect of precarious and non-standard forms of employment on the quality of work cannot be generalized, but need to be considered in depth as suggested by Pouliakas and Theodossiou (2005). This means that the satisfaction premium enjoyed by the temporarily employed with working conditions, hours, wage, better-fit and distance does not necessarily point towards the possibility that these individuals have chosen such working arrangements voluntarily but rather that the primary purpose of these workers is the stability of their employment.

Male workers without dependent children are more likely to exhibit dissatisfaction with their wages, as compared to women in the same case and parenthood (regardless of the gender). Though the existence of a significant wage gap between men and women is long-standing and clearly acknowledged by researchers in a variety of academic disciplines (Becker (1957); Blau and Kahn (1994) and more recently for Eurostat, Dupuy et al. (2009)), our findings suggest that women are less likely to report pay dissatisfaction (higher negative coefficients) compared to male workers. This finding may be interpreted as a positive reaction to the several European projects dedicated to reduce the gender wage gap (mainly launched since 2006). The European Commission set as one of the priorities, the reduction in Gender pay gap in the "Roadmap for Gender Equality". This document states the six priority areas for EU action on gender equality for the period 2006-2010 and represents the Commission's commitment to driving the gender equality agenda forward, reinforcing partnership with Member States, and other actors (Dupuy et al., 2009). The 2006 Euro-

pean Commission's Report shows that women in the EU earn on average 15% less than men, and that progress has been slow in closing the Gender pay gap (Directorate-General for Employment, Social Affairs and Equal Opportunities, 2007). Hence, with regards to career path, men and women may select different fields of study in school and may enter different occupations and industrial sectors. Clark (1997) shows that women usually exhibit more satisfaction than men. The author argues that while women's jobs are worse than men's, women report higher levels of job satisfaction than do men. The author's suggested explanation refers to the "notion of relative well-being", in particular that associated to workers' expectations, since women's expectations are assumed to be lower than men's.

With regards to the education level's effect, it appears that higher education has a significant positive effect on the probability of being satisfied with one's salary compared to low education and the lowest level due to the fact that more human capital is associated with higher wages. The educational attainment contributes to a higher level of income, faster promotions and the achievement of better jobs (Blanchflower and Oswald, 1994). Education contributes to a higher level of autonomy, reduces routines in the job and enhances participation in the relevant decisions of the firm, among many other aspects (Albert and Davia, 2005). This makes individuals with a higher education attainment expected to be more prone to be satisfied, both with the job and with other aspects not directly related to the job. This result responds to the effect of education on the individual expectations as individuals with a higher level of education have generally higher expectations that are more difficult to fulfill.

If the entry year to the current job was after the last economic recession (after 2008) then satisfaction with all job attributes is significantly lower compared to individuals who got their jobs before the recession period. This finding reflects the issue of job mismatch on overall satisfaction. This result implies that workers who obtain their job after the recession are more concerned with dissatisfaction with the quality of their job as they do not believe the job is of a good quality even though they have less uncertainty about the job loss.

Surprisingly, we notice that compared to job security, higher job tenure goes along with higher dissatisfaction in all dimensions of job facets. As the sample includes only young workers this implies that basically respondents, even though they have higher seniority in their current job, they do not seem to be satisfied with their job's adequacy, salary, life-work balance as compared to job security. This could simply mean that additional job seniority increases satisfaction with the job security through aligning aspirations with the actual conditions of the job as if job security balances somehow the disadvantages of the current job. Job security mainly related to a monetary attribute as it guarantees some equilibrium in one's life by providing a monthly income. Although an individual may have high seniority at his/her job, however his/her priorities may change and evolve across time. In the beginning when one starts working for a firm (especially for young graduates with insufficient experience) it is possible to make some concessions and accept more difficult working conditions or a lower-paid job with high working hours and less promising prospects. However, after accumulating some working experience and some notoriety at the firm, an individual might judge these concessions as brakes which may slow considerably career prospects. Hence, the job security is taken for granted and does not become a worrying issue compared to career evolution and life-work balance.

### **3.5.2.1 Overall Satisfaction with the Current Job**

In this sub-section, we investigate the factors which are likely to influence the intention to leave. Results are obtained after the estimation of a probit model where the dependent variable is coded 1 if the individual wants to change his current job and 0 otherwise. Table 3.6 reports the results for the factors which influence the intention to leave the job taking into account the selection on employment issue.

The job access channel's effect on the overall satisfaction with the current employment shows that workers who obtained their jobs thanks to jobcenters (formal channel) are more likely to be dissatisfied as compared to direct application's job finders. However, we did not

find a significant influence of referral hiring (informal channel) on the overall willingness to move to a new job.

This means that except the positive influence of jobcenters on the probability of willingness to change the current job, the other job access channels do not have significant impacts on the overall satisfaction with the job.

Therefore, in order to grasp the last labour market situation influences, informations about the most recent job change (anterior situation, reason of leaving the last job) are included in the estimation of the overall satisfaction with the job, since it is assumed that circumstances (voluntary or involuntary) of leaving the previous job should influence satisfaction with the current job. The differentiation between voluntary and involuntary job mobility is important in this context. With reference to voluntarily mobility, individuals would be more likely to display increased satisfaction with their next job as compared to those who were forced to leave (Bartel and Borjas (1981); Gottschalk and Maloney (1985)). Following this theoretical assumption, the distinction between a voluntary and forced last job change is introduced into this model. The category "involuntary job change" regroups individuals who left their previous job because they were "made redundant" or their "contract expired". Thus a forced change rather refers to a necessity to end a contract at the behest of the employer than for personal reasons.

Our findings show that workers who have recently experienced an involuntary job move are more likely to report increased job dissatisfaction. This means that they may accept jobs which do not apparently match their skills to job requirements. Therefore, it is possible to conclude that forced job changes would influence positively the current job dissatisfaction or at least with less job satisfaction. If the first goal of unemployed is to find a job, then matching quality may not be coupled with an emergency situation or may already have found a job, with better matching since they the opportunity to select and then to move. In contrast, if the individual left voluntarily his/her previous job, this implies that they have a clearer idea of their aspirations for the next employment. They are not necessarily bound to find a new job as those who lost their job involuntarily, so they are less stressed to

TABLE 3.6 – Willingness to change the current job

Variabes	Coef	z-value
With partner	0,107*	1.91
Children	0,238	1.53
Women	0,083	1.54
Non French	-0,059	-0.73
<b>education level</b> (Ref. no diploma) Low education	0,197***	3.13
Average education	0,313***	3.71
High education	0,377***	4.05
<b>Job access channel</b> (Ref.direct applications) Social Networks	0,060	1.33
School Networks	-0,028	-0.18
Job centers	0,337***	5.48
Others	-0,117	-1.22
Job tenure (in months)	-0,002*	-1.91
Work. experience (in years)	0,006	0.55
Living in urban areas (Ref.Rural)	-0,050	-0.96
Involuntary previous job change (Ref. Voluntary)	0,091**	2.30
Entry year after crisis (ref before 2008)	-0,022	-0.37
Management responsibilities	0,095*	1.70
Public sector (ref. private sector)	-0,168*	-1.82
Mills ratio	0,645***	2.56
Intercept	-1,717	-11.15
Observations	3070	
Log likelihood	-44568.945	
Wald $\chi^2(159)$	2975.87	

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%

Note : Additional control variable is the function type (10 options) and the firm's size (3 options). The model was estimated using the STATA (13) CMP-module. As the job access channel, job tenure and the working experience are endogeneous the use of the CMP model helps to estimate simultaneously and recursively the 4 equations using the IV method.

Source : Labor survey, Insee (2010), author calculation.

accept any opportunity and they are more concerned with the job quality with no urgency. Thus, they are more likely to accept a new job which matches better their aspirations compared to involuntary job change respondents. It is plausible to conclude, however, that having been labour market mobile also serves as a positive signal to employers. Labour market mobility could then be a criteria for increasing "negative selection" (Solga (2002)) : the mobile individuals may belong to a group characterised by an advantageous skill set, in essence self-selecting into better jobs, which also would imply a higher degree of job satisfaction.

Besides the motivation (voluntary or forced) of the last job change, it is assumed that job tenure is an important determinant of job satisfaction. In line with initial expectation, higher job tenure goes along with higher satisfaction in the overall model. Recall that in the previous section, we showed that lower tenure is related to higher satisfaction in all dimensions of satisfaction rather than job security. However, additional job tenure would decrease dissatisfaction with the job through aligning aspirations with the actual conditions of the job (i.e, a strategy of "satisficing"). This also holds for occupational tenure, since it has been suggested that workers are "socialised into" the specific occupation and its reward structures (Mortimer and Lorence, 1979). In essence, the opposite effects accumulating for job tenure may "cancel out" and render it insignificant in analyses (Fasang et al., 2007). However, it is less comforting to discover that workers who have a management responsibility by supervising a team exhibit high dissatisfaction probability as compared to workers who are not managers. In contrast, workers belonging to the public sector tend to manifest lower intention to leave their current job, since employment stability or security is an advantageous of working in the public sector.

Concerning the effect of the highest education level achieved, an increasing significant effect of the diploma is noticed suggesting that the higher is the education level, the higher is the overall dissatisfaction with the current employment. Recall that in the previous section, our findings underline a clear significant relationship between the highest education level and the willingness to change the current job for a lack of job's adequacy to own abilities

while no significant effect was noticed on satisfaction with the pay. These two findings, could imply that for the highly-educated, the major reason which lowers their satisfaction is mainly the skills mismatch, thus, the danger, for this specific group, would be less career prospects.

It should be stressed here that no information is available on other important factors of work (such as the availability of training and opportunities for career development and promotion, employee benefits, etc.). Hence, other than the subjective perception of workers toward their job, already discussed above, we attempt to give some indications about the quality of youth employment also through the study of objective indicators such as the contract type, wage and job tenure. We believe that this work is not pioneer in the field however we tempt to highlight some interesting causalities that may exist between the access channel and the quality of the job match. Results discussed earlier in this chapter comforts some commonly argued findings about job matching quality (just to mention the result concerning positive effect of social networks with respect to the non-monetary facet (job security), whilst its negative effect on the monetary facet (wage) was confirmed) while others underline some opposite results to the literature (e.g., higher education is more prone to exhibit higher willingness to change the job for a the job mismatch to own abilities).

### **3.5.3 The contract Type as a Matching Quality**

The purpose of this section is to investigate the main factors influencing the contract type as one objective indicator of the match quality. Recall that the contract type can be either (1) permanent, (2) fixed-term or (3) temporary. Particularly, we are interested to know in what extent social networks can be efficient by increasing the probability of finding permanent jobs rather than "atypic" contracts (fixed-term and temporary).

Previously in this chapter, it was argued that the probability to be dissatisfied with the job increases for all dimensions of job facets compared to job security and regardless of the access channel. We investigate, here, the influence of these different channels on one



TABLE 3.7 – The determinants of the contract type

	Fixed contract		Temporary contract	
Men with children	-0.000	-0.00	-0.492***	-2.72
Women without children	0.234***	7.01	0.111	2.27
Women with children	0.157***	2.98	-0.101	-0.75
With partner	-0.207***	-5.84	-0.263***	-4.63
Non French	0.112**	2.15	-0.184*	-1.87
Urban	0.017	0.45	-0.116**	-2.32
<b>Education level (Ref.No diploma)</b>				
Low	-0.001	-0.01	-0.895***	-15.51
Average	-0.484***	-8.58	-2.001***	-23.53
High	-0.341***	-5.80	-2.714***	-27.94
<b>Anterior situation (Ref.Student)</b>				
Unemployed	0.367***	10.16	-0.396***	-6.83
Employed	-0.280***	-8.17	-0.589***	-11.33
<b>Access channel(Ref.direct applications)</b>				
Social Networks	-0.194***	-4.56	-0.487***	-9.28
School Networks	-0.020	-0.27	0.447***	6.01
Job centers	0.042	0.69	-0.742***	-7.26
Others	0.267***	3.60	-0.663***	-5.18
<b>Entry&gt;2008</b>	1.277***	39.53	1.030***	19.56
<b>Exeperience</b>	-0.120***	-18.96	-0.418***	-38.83
Observations	33384			
Log likelihood	-58179.477			
Wald $\chi^2(182)$	12222.59			

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%

Note :Reported results are coefficient of each explanatory variable's effect on the contract type. Z values are reported next to each coefficient.

Source : Enquête Emploi Insee 2010. Observations unweighted.

objective indicator of the job match process which is the contract type. Interesting effects are highlighted in Table 3.7.

One important predictor is the job access channels. First, young individuals hired through social networks seem to be less likely to find a fixed-term or temporary employment rather than a permanent one. This result suggests that using social networks increases job security by finding a permanent job and reducing uncertainty. Recall that finding a job through social or school networks increases significantly satisfaction with job security as previously discussed. While no significant effect is noticed for school networks on the probability of finding fixed-term jobs, it appears that this channel helps to find temporary jobs rather than permanent employments.

We have seen in Table 3.5 that the school networks rather than direct applications job finders, reported more dissatisfaction with all job facets compared to job security. However, our findings reported in Table 3.7 show that school networks job finders are more likely to be hired under temporary contracts rather than a permanent one (while for this channel we observe a positive but non significant effect on permanent rather than fixed-term contracts). We may conclude that school networks appear useful to find a first experiment in the labor market through which a worker can develop his/her own human capital, earn some working experience and get to know more the needs of the labor market.

While the formal employment intermediates do not play a significant role on finding a fixed-term employment, the effect of this channel consists in a significant decrease of the likelihood of finding a temporary job rather than a permanent one compared to direct applications. We conclude that direct job applications are rather efficient in finding permanent jobs than jobcenters (formal) and school networks (informal). Results show opposite effects : while a positive effect is noticed for the probability of getting fixed-term contracts, a negative effect on having a temporary job rather than a permanent one is observed. It is to mention that the any "other channel" (including job examinations) are less likely to be associated with temporary contracts.

Concerning the effects of the household's characteristics, it seems that fatherhood de-

creases significantly the probability of having a temporary job rather than permanent employment. While for male workers, fatherhood does not affect the probability of having a fixed-term contract, an opposite effect is observed for women in general whether they have children or not. It is well documented in the literature that male workers benefit considerably from the advantages of the fatherhood perception from the recruiters side. Fatherhood represents signals of responsibility, seriousness and devotion. However results are mixed for the motherhood's effect.

Concerning the effect of living with partner, we find significant negative effect on having an "atypic" job rather than a permanent one. We conclude that living with partner has positive impact on having a permanent and secured job (or may be being in couple might be conditional on having a stable employment). This finding joins previous results discussed above concerning dissatisfaction reasons. As underlined previously, living with partner increases satisfaction with the job security compared to working conditions while no significant effect noticed with the other reasons of dissatisfaction.

Looking at the education's effect shows that the highly educated are more likely to obtain permanent jobs rather than the less educated. It is plausible to conclude that diploma constitutes an important determinant for the employability of young individuals and it also increases job security as it provides a good signal to recruiters. Hence, the highest is the diploma, the highest is the probability to obtain a permanent job rather than a temporary or a fixed term contract.

The information on previous situation shows that being unemployed before getting the current job is consistent with an increase of the probability of getting a fixed term job compared to permanent one. This finding underlines the "scarring effect" of youth unemployment particularly after the recession. However the impact of being previously employed is consistently significant and negative on the probability of finding a fixed term contract or a temporary job suggesting that their likelihood to find permanent contracts increases compared to those who were inactive. Hence, job changers are more likely to find a permanent job compared to those who were jobless. Previously unemployed and

employed workers are less likely to be hired in temporary jobs compared to ex-inactive employees which is consistent with the fact that most of these people are women and younger individuals. This specific group is more likely to be in the process of entering or re-entering employment, after having taken some time off due to various care responsibilities or further education.

Not surprisingly, concerning the working experience effect, results underline that an additional year of experience in the labor market is found to exert a negative significant effect on both "atypic" contracts. Considering the effect of the variable which captures the recession period effect (entry >2008), results underline that finding his/her job after the crisis seems to unambiguously increase the likelihood of finding an "atypic" employment (fixed term and temporary job) rather than a permanent one compared to workers who entered before recession.

One might conclude that in relation to the previous section where the dependent variable was the determinants of satisfaction with different work arrangements, the impact of social networks on satisfaction with job security is quite similar to the effect on the contract type too as social networks users are more likely to find permanent jobs rather than temporary ones (however the expected effect of school networks is not significant for the fixed-term contract). Therefore, it seems that having experienced an unemployment period just before obtaining a job is likely to reduce the worker's chance to be hired through a permanent contract compared to inactive workers which is significantly not the case for the on-the-job movers.

### **3.5.4 Tenure and Wage as Proxies for Matching Quality**

The primary purpose of this section is to estimate the impact of job access channels on both job tenure and wage for the young workers in France (see Table 3.8. Tenure in our data is the number of months the individual has been working for the current firm. The wage regression is estimated where the dependant variable is the log of the monthly wage.

The empirical results obtained by the estimation of the model are detailed bellow. Results for job tenure are presented in the first set of colomuns of Table 3.8. The wage equation is presented in the second column. Although the main purpose of this section is to emphasize the effect of the job search channel which provided access to the job on the monthly wage, it is interesting however, to explore the impact of the individual sociodemographic characteristics in additions to other indicators of human capital (i.e, the education level, the experience) and job characteristics.

Concerning the information on salary, the wage from work is by definition only observed for people engaged in employment. This means that only people who enter the labour market have a non missing wage. However, even among those who are on-the job, there remain individuals who were may be uncomfortable when declaring their monthly wages so they preferred not to answer (in all estimations where the wage is included, we take into account the missing values when wage is not seen by controlling for selection on the availability of wages). We assume that the decision whether or not to work is made on the basis of both observed (i.e. education, gender) and unobserved (i.e. motivation, preference for paid labour) characteristics of individuals. Hence, if the group of working young people is a randomly drawn from all youth of working-age, then there is no selection issue.

However, if the group of working people is selected on the basis of some unobservable characteristics that also affect their wage, then there is a problem of sample-selection. This is because the decision whether or not to work is based on unobserved characteristics, such as preferences for unemployment insurance, reservation wage, leisure, training, that correlate with observed characteristics in the wage equation. In this case, wage disparities will be biased, unless we include information in the wage regression that captures the effect of selection on the unobservables (see Vella (1998)). Using information in the data, we control for this potential difference in unobserved propensity for labour market "employability" by controlling for selection on the availability of wages.

TABLE 3.8 – Wage and Job Tenure Regressions

	Job Tenure		Wage	
Age	5,695***	92.42	-	-
<b>Gender and Children</b>				
Men with children	2,514***	5.90	-0,043***	-2.61
Women without children	-6,720***	-16.91	-0,075***	-3.17
Women and children	-4,593***	-9.38	-0,198***	-10.07
<b>With partner</b> (Ref.No)	2,023***	4.87	0,069***	7.03
<b>Non French</b> (Ref.French)	-4,187***	-5.99	-0,066***	-3.61
<b>Urban</b> (Ref.Rural)	-3,082***	-10.35	-	-
<b>Education level (Ref.No diploma)</b>				
Low	-7,548***	-15.88	0,109***	7.74
Average	-13,836***	-24.55	0,314***	8.44
High	-22,777***	-41.41	0,497***	12.47
<b>Access channel (Ref.Direct applications)</b>				
Social Networks	0.05***	2.88	-0,004***	-3.42
School Networks	0,057***	4.28	-0,004***	-4.85
Job centers	0,197***	13.45	-0,014***	-37.09
Others	-0,023**	1.26	-0,003*	-2.26
<b>Previous situation (Ref.Inactive)</b>				
Unemployed	-21,125***	-64.49	0,169**	2.47
Employed	-18,191***	-65.10	0,218***	3.71
<b>Public Sector</b> (Ref.Private)	1,853***	6.37	-0,007	-0.58
<b>Working experience</b> (in years)	-	-	0,010	0.48
<b>Managment responsibility</b> (Ref.No)	-	-	0,180***	16.04
<b>Part-time</b>			-0.552***	-722.98
<b>Access after 2008</b>	-	-	-0,044***	-3.22
<b>Tenure</b> (in months)	-	-	0,007**	2.27
Mills	0.486***	6.01	-0.033**	-2.27
Observations	12560		12560	
R2	0.40		0.36	
Log likelihood	-89902.253		-89902.253	
Wald $\chi^2(253)$	915915.67		915915.67	

- 150/317 Both regressions are 3SLS with selection of respectively the monthly wage and the job tenure (in months). Student statistics are reported. Additional control variables for wage are the industry type (10) and the region of residence (22). Instruments for tenure are age and living in an urban area.

Source : Labor survey, Insee (2010), author calculation.

It should be stressed here that a detailed explanation of our approach, in order to calculate the effects of the job access channel (discrete variable) on wages and on tenure (both continues), is explained in the Box 1 bellow.

#### **3.5.4.1 Job search channels effects on wage**

While results are inconclusive concerning the influence of social networks in general on monetary outcomes namely wages, most studies describe the association between access channels and job tenure to be a positive one. The assumption frequently argued is that while the social networks (personal, professional and school) have a positive effect on the job tenure we expect to find an opposite effect on income. Kramarz and Skans (2014) show that while social networks provide the less-skilled with access to low-paid jobs, yet this channel allow for a positive effect on job tenure since referred workers are more likely to keep their jobs for a longer period compared to other channels' job finders. In addition, from the perspective of human capital accumulation, workers with high tenure are expected to receive higher earnings prospects due to their high accumulation of firm-specific skills.

Concerning the effect of the job access channel, the results show that both the job centres and social networks generate lower-paid jobs compared to the reference alternative (direct applications). However, social networks have less negative effect than the formal employment intermediates (-0.4% compared to -1.4%, more in line with sociological findings which emphasize the weakness of strong ties). However school networks have not significant negative impact on wages. It is plausible to conclude that the social networks channel is apparently less efficient in terms of wages. Our finding are in line with those underlined by Delattre and Sabatier (2007) where the authors reject that networks are always associated with higher wages. The authors justify their conclusion by the fact that networks' users may have unobserved characteristics, negatively correlated with wages. We can also argue that network users are probably looking for more stable jobs at the cost of relatively lower wages (very slightly lower than -0.4%). Their findings are opposite to those of Margolis

and Simonnet (2004) who use a French longitudinal survey and find a positive effect of the network on wages (they consider as the reference category of access channels "any other method"). It should be noted here that Margolis and Simonnet (2004) have a broader definition of network which considers both strong and weak ties as one type of social network.

Differently from these analysis, our study gives more insight on the distinct role played by both strong and weak ties as the distinction between social networks (strong ties) and school networks (weak ties) is addressed in order to enhance the interpretation of these two types of contacts' effect. Hence, our results suggest that, while referral hiring is better performant with regards to job security and work contracts (non monetary attributes), yet it is apparently less efficient in terms of monetary attributes (negative effect of both ties on wages despite the marginal negative effect of social network compared to the school one).

Concerning the influence of tenure on wage, it appears that the effect of one month of tenure on the log wage is equal to 0.007. Abraham and Farber (1986) argue that good workers or workers in good jobs or good matches both earn more throughout the job and have longer job durations (Abraham and Farber, 1986). Altonji and Williams (2005) provide new estimates of the return to job seniority using a dataset similar to that employed in Altonji and Shakotko (1987) and Topel (1991). Altonji and Williams (2005) find that re-estimation points to an effect of years of tenure on the log wage is equal to 0.11 which is far below the finding of Topel (1991) as the latter finds that ten years of current job seniority raise the wage of the typical male worker in the United States by over 25 percent.

With regards to the effect of the anterior situation before finding the current job, the positive effect of being a job mover (previously employed) on the monthly wage stresses the fact that on-the job searchers are more likely to find good matches as compared to out-of the job seekers. They accept to quit their job for better paid employments. This yields the result according to which workers who did not experience an unemployment spell or a period of inactivity earn significantly 21.8% more than previously inactive workers



(whether they have been NEET or in the school system). This wage premium represents almost 1.3 times the wage premium of workers who were unemployed while searching for their current job (+16.9%). This result holds even after controlling for the industry type (10 alternatives) as well as working/not in the public sector (reference was private).

Estimation results show that fatherhood appear to have a negative significant impact on wage since we observes that male workers with children earn 4.3% less than male childless workers. While women are likely to move more as compared to men without children, they appear to obtain less-paid jobs regardless whether they have children or not. The negative effect of being a female worker decreases dramatically if she has children (motherhood implies -20% of the monthly wage compared to childless male workers, i.e., 5 times the wage penalty of fatherhood). This finding goes in line with few recent research works in the United states underlying what Budig (2014) calls "The fatherhood bonus and the motherhood penalty". Studying the wage evolution of the American population over 35 years, the author argues that for most men, fatherhood results in a wage bonus, while for most women motherhood results in a wage penalty. "While the gender pay gap has been decreasing, the pay gap related to parenthood is increasing," underlines Budig (2014).

These differences persist even after controlling for factors like the working experience, the industry and the sector type (public or private). According to Budig (2014) this wage disparity is not necessarily synonymous with decreased productivity of female employees after becoming mothers, while male work harder when they become parents, but it could be related to what "employers expect them to". It should be stressed that, despite the negative impact of being a female worker regardless whether they have children or not, having children depresses the wage gap even further (-27% compared to -15.6% for childless women). This could be explained by the great proportion of female workers in part-time jobs. Not surprisingly, looking at the part-time jobs effect on wages shows that concerned workers are likely to receive the half of the full-time workers (almost -55%).

With regards to the education level, an expected result shows an increasing positive influence of the diploma on wages. Hence the higher is the diploma, the greater is the effect

on wages. This simply means that higher educational attainments contribute to a higher level of income. This result goes in line with the predictions of the human capital theory but also with previous results emphasized earlier in this chapter, when we addressed the determinants of job satisfaction. Since we show that higher education has a significant positive effect on the probability of being satisfied with one's salary, this also implies that more human capital is associated with higher wages as postulated by Blanchflower and Oswald (1994).

Looking at the variable which captures the effect of the last recession period, if the individual found his current job after the year 2008 then he is expected to receive 4.4% less than workers who found their jobs before the crisis.

One might conclude that both social networks and school networks occupy a comfortable position in providing employments, longer tenure and satisfaction with the job security, compared to the most popular channel : direct applications. Although it is desirable " to win at all levels," these channels seem less efficient to provide better satisfaction with other work arrangements such as salary and the "skills matching". Still to mention that social networks perform better than the formal employment jobcenters in terms of providing permanent work contracts and smaller wage gaps with jobs found through direct applications. The latter channel is apparently performing better in terms of providing good matches with higher satisfaction with both monetary and non monetary job attributes, yet, this channel is still less likely to provide access to durable employments as compared to the social networks.

### Box 1 : Calculation of Net Effects

When estimating a wage regression by OLS, the parameters associated with the presence of the access channel (direct, social networks, school networks, job centres and other channels) are interpreted as the wage differential (because the estimated monthly wage is logarithmic). However, the estimation of a system of two (or more) simultaneous equations (job access channel, contract type, tenure, wage and overall satisfaction) changes the interpretation of the job access channel's coefficients in the wage and tenure equations. Indeed, this variable in the wage and tenure equations is associated to the predicted probability. Since this probability is continuous the associated parameter is no longer a probability differential. To get the wage and tenure differentials we need  $\lambda$  estimates, the predicted probability of each alternative (for example the predicted probability of obtaining a job through social networks (SN) corresponding to SN job finders  $\hat{S}N_{(SN=1)}$  and the predicted probability of obtaining a job through social networks for non SN job finders  $\hat{S}N_{(SN=0)}$ ). This differential can be obtained by calculating the following :

$$\begin{aligned} & \hat{\lambda}_{direct}(\overline{\widehat{direct}}_{(direct=1)} - \overline{\widehat{direct}}_{(direct=0)}) \\ & \hat{\lambda}_{Socialnet}(\overline{\widehat{Socialnet}}_{(Socialnet=1)} - \overline{\widehat{Socialnet}}_{(Socialnet=0)}) \\ & \hat{\lambda}_{School}(\overline{\widehat{School}}_{(School=1)} - \overline{\widehat{School}}_{(School=0)}) \\ & \hat{\lambda}_{jobcenter}(\overline{\widehat{jobcenter}}_{(jobcenter=1)} - \overline{\widehat{jobcenter}}_{(jobcenter=0)}) \\ & \hat{\lambda}_{other}(\overline{\widehat{other}}_{(other=1)} - \overline{\widehat{other}}_{(other=0)}) \end{aligned}$$

We can then test the significance of this differential by testing the differences between the following quantities :

$$\begin{aligned} & \hat{\lambda}_{direct} * \overline{\widehat{direct}}_{(direct=1)} \text{ and } \hat{\lambda}_{direct} * \overline{\widehat{direct}}_{(direct=0)} \\ & \hat{\lambda}_{Socialnet} * \overline{\widehat{Socialnet}}_{(Socialnet=1)} \text{ and } \hat{\lambda}_{Socialnet} * \overline{\widehat{Socialnet}}_{(Socialnet=0)} \\ & \hat{\lambda}_{School} * \overline{\widehat{School}}_{(School=1)} \text{ and } \hat{\lambda}_{School} * \overline{\widehat{School}}_{(School=0)} \\ & \hat{\lambda}_{jobcenter} * \overline{\widehat{jobcenter}}_{(jobcenter=1)} \text{ and } \hat{\lambda}_{jobcenter} * \overline{\widehat{jobcenter}}_{(jobcenter=0)} \\ & \hat{\lambda}_{other} * \overline{\widehat{other}}_{(other=1)} \text{ and } \hat{\lambda}_{other} * \overline{\widehat{other}}_{(other=0)} \end{aligned}$$

### 3.5.4.2 Job search channels effects on tenure

We comment here the main factors affecting the job tenure. Job tenure (available in months) is estimated controlling for individual characteristics, education, the job access channel, potential experience in addition to the type of industry (10 categories), living in an urban area and age. In this model, other than the selection issue related to the presence of unemployed, we control for the endogeneity of each of the following three variables : the working experience, wage and the access channel. The econometric results are reported in the second column of Table 3.8.

Our findings show that both informal channels and the formal employment intermediaries play a significant positive impact on job seniority which is not the case of the "other" channel. This positive relationship occurs after controlling for the function type (10 alternatives) suggesting the presence of an industry specific effect.

It is plausible to conclude that social networks and school networks efficiency matters significantly but differently. In one hand, social networks efficiency in providing high satisfaction with job security is previously proved in this chapter and enhanced through increasing the likelihood of finding permanent contracts rather than "atypic" jobs. Their negative effect on wages remains very low compared to other channels. On the other hand, looking on its effect on finding a permanent job, school networks are proved to provide first experiments (temporary contracts) rather than permanent jobs.

Hence both types of networks matter differently depending on the referred characteristics. Recall that age is an important determinant of using one or the other type of networks. School networks matter the most for the recent graduates or the youngest while social networks is more useful to the eldest. Since both types of networks provide less-paid jobs at the short term, this does not allow us to deny a possible enhancement of these channels' efficiency at the long term when the impact of age tend to diminish. A further investigation of these channels efficiency accross time through the use of data that span more than one period would provide more accurate conclusions.

With regards to the interaction term between gender and having children (if any), results show that compared to childless male workers, fatherhood appears to increase significantly job tenure suggesting that for this category of workers, having children has a significant impact on staying longer in the firm. However, for women the effect becomes significantly negative whether they have children or not. It should be stressed that motherhood seems to strengthen this negative impact suggesting that mothers stay shorter at their current job compared to childless male workers (maternity leaves).

Overall, this interesting finding stresses the idea that women are more likely to stay shorter at their jobs, especially if they have dependent children, thus family responsibilities. Similar negative effect on job tenure is noticed for non French workers who seem to be more mobile as they stay shorter at their jobs compared to French employees. We have already emphasized in the previous chapter that the nationality of the candidate is an important determinant of the probability to find a job. We showed that these workers are more likely to encounter difficulties to find a job compared to French workers mainly due to discrimination issues at the hiring process.

The effects of the education level on job tenure stresses that compared to those who did not obtain a high school graduation (other diploma < Bac degree in France), both the low (= Bac degree in France) and the average education (Bachelor degree : 3/4 years at most after Bac) obtain jobs that endure and stay shorter. This means that the highest is the education level the more mobile is the worker. One possible explanation of this finding is that there exists possibly a high job mobility among this group of graduates. These latter are characterized by high and polyvalent human capital due to richer school programs in line with the latest labor markets requirements. Any other alternative explanation could be that recent graduates achieve their highest diploma later implying that they also enter into the labor market later. Most of the time, high qualified workers have different behaviour in particular at the beginning of their professional career as they are aware of the competitive advantage they possess compared to other workers, hence, they become more demanding in

terms of "skills matching" and wages. Thus, they often move between jobs in order to find the optimal job match which provides higher returns to their previous costly investment in human capital.

We also notice a negative relationship between job tenure and whether the worker was anteriorly employed or unemployed is noticed. It should be mentioned here that this last effect should not imply too much concern since the data used in this analysis are cross-sectional and workers are still at the job at the time of the survey. Hence, this negative effect is as simply as the reflect of recent access to the job by these workers. Not surprisingly, people working in the public sector stay longer and benefit from high job security and more seniority at the firm. Indeed these workers may face a trade off between job security and wages. If these workers are risk averse then they may be concerned with intrinsic rather than extrinsic interests. Janaki and Herger (2013) underline that intrinsic motivation refers to internal motivations such as autonomy, stability or trust. Extrinsic refers to external motivational techniques such as money, rewards, etc.

### 3.6 Conclusion Remarks

Overall, it is often claimed that the European employment strategy focuses mainly on creating more jobs and less effort is devoted to creating better jobs (Fasang et al., 2007). A useful measure for the quality of jobs is job satisfaction as one of the major focuses of this chapter. In particular, the relationship between job access channels and different indicators of job matching quality including satisfaction with the job are analysed. Since job satisfaction is multi-dimensional, use was made of the detailed distinction between the different facets of job satisfaction provided by the Enquête Emploi, Insee (2010). These facets of job satisfaction are the following 5 components that can be monetary and non-monetary : satisfaction with job security, skills-match, wage, working wonditions and work-life balance, i.e. working hours and distance-to-work (included in "any other" facets). In addition to job satisfaction indicator as objective indicator, this research work focuses also

on other objective indicators, i.e. work contract, wage and job tenure.

In this analysis a particular concern is dedicated to the role played by the job search channels providing employment. In particular, the distinction between formal channels (namely both public and private employment intermediates) and the informal channels (social and school networks) is made. Differently from previous research works on the relationship between the use of social networks and job matching quality, this analysis suggests a less broader definition of social networks through the distinction between social/professional contacts (strong ties) and school contacts. The question we try to answer to is the following : when formal/informal channels have an advantage and when we may expect to find them? We look into comparative effects of formal and informal channels on young worker-job matches and use French data on youth for empirical analyses. In line with initial expectations, the social networks play a positive role on job security and both social and school networks play different roles on the job outcomes and satisfaction. It is plausible to conclude that while school networks appear to provide temporary jobs (possibly as a stepping stone to permanent ones), social networks are synonymous of more durable and stable employments compared to the formal channels. Despite this positive effect of informal channels on job security and seniority, negative effects are noticed on wage and satisfaction with skills matching and other job facets for the informal channels. However, once the industry type and job tenure are included in the determinants of job dissatisfaction model, then the differences among the formal and informal channels disappear.

As there is a high probability and a significant amount of evidence that satisfied workers tend to be more productive and look more favourably on to flexibility, the notion of the "satisfied worker" is a key element in obtaining a flexible and highly qualified workforce. This research work has shown that working experience, high education and contract type represent several conditions which increase different elements of job satisfaction. In this analysis we also underline the particular role played by social networks to help youth in finding durable and secured employments but also the negative effect of this channel on wages and satisfaction with skills matching. The overall conclusion of this paper is that

the job access channel is an important determinant of job satisfaction. This is in line with the growing debate on the need to enhance young workers to actively render their search strategy more efficient. In this context, strengthening the role played by school networks and enabling smoother transitions from school-to-job would serve not only to empower youth employability but also to enhance the quality of the match and increase the well-being at the workplace. Therefore, as the impact of the formal employment intermediates is still quite unclear on finding good matches which endure, this research work underlines the greater efforts that remain to be done in terms of public policies to render these devices more efficient and more reactive for, both employers and job seekers (needs).

This can be possible after making the institutional intermediates more up to dated with new needs of the labor market. The variation in training programs is necessary and rendering this channel more attractive to the highly educated is also recommended through the development of new partnerships with firms with high potential of growth and recruitment opportunities.

At this level of our analysis, we did not explore enough the information available in our data for the unemployed workers. We only consider them when controlling for selection on employment since we have been only focusing on the employed workers until now. The next chapter of this PhD work is dedicated to the comparaison of employed and unemployed job search behaviour in terms of search strategies and preferences. This last chapter addresses several questions in the purpose of providing new interesting evidences related to these two types of job seekers. Understanding the differences between on- versus off- job search could be interesting for implementing labor market policies dedicated to enhancing youth employment.





*"One should hardly have to tell academicians that information is a valuable resource : Knowledge is power ... a phenomenon I shall term search"*

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(Stigler, 1961)

# **4 Who Uses What ? Employed and Unemployed Job Search Strategies : Evidence from France**



## 4.1 Introduction

Job search theory has been subject to large empirical and theoretical contributions and has been extensively studied (since pioneer work of Stigler (1961), McCall (1970), Pissarides (1979) and Mortensen (1987)). One of the primary interests of the theory was essentially the behavior of job seekers who are looking for best job opportunities depending on several parameters. The effects of these parameters, for instance, on the mobility of individuals from unemployment to employment and vice versa have been investigated. First literature emphasizes the importance of the reservation wage in the decision of accepting a job offer (McCall, 1970). The study of the job search process matters importantly for a number of policy issues including the study of human resources allocation in the labour market. The job search process is supposed to lead to match job seekers to suitable job opportunities and, so, making society more productive overall. Now since it is acknowledged that efficient matching process would mean that individuals acquire the job that maximises their wage and their productive contribution, it is important to understand how this process can lead to these ambitious assumptions. In other manner, what factors explain the intensity and the disparities of this search process ?

Although the literature has already highlighted important evidence such as the role of search effort, as an endogenous predictor, and the reservation wage, still the influence of the job search strategies through the investigation of the different channels used, deserves high interest. Several authors pointed out the role played by job search methods as a determinant of the job search efficiency. Job search strategy studied through the determinants of using one or multiple channels combined together, should raise our knowledge about who, among the job seekers, uses what and what factors affect directly and significantly these probabilities. Kahn and Low (1990) underline that job searching is also looking for additional information if more job search methods are used and combined together. The use of different and multiple search methods, increases the stock of information needed by the job seeker in order to be more aware of the labor market opportunities and require-

ments. Moreover, several researches underline the importance of search strategies used by job seekers as well as their effectiveness in terms of providing good matches and reducing unemployment duration (Mortensen, 1987, Devine and Kiefer, 1993).

The job search methods have traditionally been divided into formal and informal methods. Formal methods include using the services of employment agencies or answering advertisements published in newspapers, journals and internet. Using one's personal contacts is among the most studied informal job-search strategies, but other methods such as contacting employers directly are also considered as informal job-search methods (Green et al., 2011). As job-search categories, formal and informal methods are too broad and too aggregated. Thus, research into job search tends to be more specific about the methods being studied. Therefore, there are other ways of categorising job seeking behaviour, such as considering job search by individuals in employment versus the job search conducted by unemployed individuals. In particular, during periods of low labour demand, competition for jobs is fierce as those unemployed find themselves not only in competition with a larger pool of other unemployed job seekers, but also with on-the-job seekers. The latter group consists of those employed but searching for a new job, may be in order to find a better job-match quality or a more paid job (Longhi and Taylor, 2014). From the perspective of a government aiming to prioritise the optimal allocation of its resources, the latter seems more imperative. However, given that being in employment is a better position from which to search for work (Weber and Mahringer, 2008), there may be lessons that the unemployed can learn from employed job seekers. However, the extent to which employed job seekers affect the outcomes of the unemployed will depend on the extent to which they search for the same types of job. If they are obviously different, then we cannot conclude that they directly compete with each other for the same job opportunities.

Our contribution is to compare the characteristics and behaviours of employed and unemployed job seekers focussing on youth and taking into account the last economic recession context. Hence, three topics related to job search are investigated. These are mainly, employed and unemployed : characteristics, preferences and strategies. We compare

job search strategies of both employed and unemployed job seekers focusing on the effect of the labor market status (employed or unemployed) on job search intensity and strategies. For this purpose, we use representative data on the French labor survey "Enquête Emploi en Continu (EEC)" (Insee, 2010). First, we propose as a possible measure for search intensity, the number of methods used in order to find a job. We suggest that this indicator may reflect the level of a young worker job search intensity. This indicator is the result of a personal choice depending on a set of individual characteristics. Moreover, increasing the job search intensity as measured by the number of channels used, imply higher employment probabilities as the result of enhanced visibility on the labor market. Second, we study youth job search strategies, where we suggest an expansion of the range of job search methods, even though, we will be particularly concerned with the study of the determinants of choosing social networks as an alternative.

We assume that disparities in job search efficiency may be, not only, due to differences in terms of job preferences, but also to differences in terms of search strategies used by the unemployed job seekers to find a job (formal/informal methods, active/passive search). Therefore, unemployed job seekers might choose same search efforts, whilst choosing different job search strategies which would lead to different probabilities of receiving a job offer.

The remaining of the paper unfolds as follows. Section 2 summarizes several pionner and recent empirical and theoretical contributions related to our topic. Section 3 focuses on our data presentation, variables description, where some stylized facts are highlighted. Section 4 describes the econometric methodology adopted for our analysis. section 5 is dedicated to the presentation of our results. Finally, the chapter concludes with an overview of key findings.

## 4.2 Literature Background

As Autor (2001) noted, "the labour market is replete with imperfect and asymmetric information" (p. 25). The cost of inefficient job search for job seekers includes prolonged unemployment spells and emotional distress, and there are also wider societal costs. Job search is in general costly for the job seeker but it is also necessary in order to find employment. From an economic perspective, job search theory is concerned with individuals' decisions to accept or reject job offers given the cost of searching and the reservation wage. In this case, job offers are treated as exogenous and the decision to accept the offer (i.e. the strategy used) is based on the reservation wage (Atkinson and Micklewright, 1991). The sociological perspective on job search takes into account more aspects of the job-search process. In fact, a sociological approach to job search is frequently concerned with the activities that led to job offers being made, to jobs being found, and even to the motivating factors leading to job seekers starting the job search at all. The next paragraph provides a review of how job search has been measured and discusses the notions of different job-search methods, intensity and effectiveness.

### 4.2.1 Measuring Job Search

There are different ways of measuring search intensity according to the literature review elaborated by White and Bryson (1994) on effective job search. These measures are mainly : the time devoted to search (Krueger and Mueller, 2008), the number of contacts per period or the number of search methods used (Devine and Kiefer, 1993). Furthermore, the authors suggest that in the U.K., increasing the number of methods used has a positive relationship with the probability of finding a job. In the U.S.A, however, this relationship does not hold and there actually seems to be a negative relationship between these variables. A limitation to using job-search intensity for measuring and studying the job-search process is the lack of a formal empirical definition.

The behavior of job searchers is generally modeled through the effort of each job seeker



during the search period. Bortnick and Ports (1992) underline that the number of search methods used by job seekers appears to have relatively small effect on the likelihood of finding a job. The author shows that the likelihood of obtaining a job increases slightly with each additional method of job search, and decreases when five or more methods were used. He adds that while job seekers who use two job search channels were slightly more likely to find a job than those who use one method, it is more the choice of the job search methods that matters than their quantity. Bortnick and Ports (1992) find that the use of the public employment offices (alone or with another channel) provides the lowest chances of being employed at the next period. According to Sabatier (2002), the arrival rate of job offers depends positively on the intensity of the search effort as well as the combination of search technologies.

Hence, focusing on the job search channels employed may provide useful information about which channels are more efficient. There is a large body of literature indicating that using "word of mouth" or personal contacts, is among the most popular and effective search procedures. Blau and Robins (1990) emphasized that social networks was the most effective channel for job seekers in the U.S. However, job search success does not depend solely on the job seeker's ability to find a job, but is also determined by external factors and other circumstances. For instance, a tight labour market may increase the chances of finding a job for a less-skilled or experienced individual, while location in a peripheral area without good access to an employment centre may limit job seekers search (Green et al., 2011).

McQuaid (2006) used the term employability to refer to the set of factors that together affect a person's chances of finding a job. The author classified this set of factors as individual factors (the person's skills, qualifications, length of unemployment, demographic characteristics, etc); personal circumstances (access to resources, family support, caring responsibilities, etc); and external factors (labour market demand, mobility) and in this way provided an integrated perspective of job search. An approach that takes as many of these factors into account is bound to provide a better picture of the effect of job seekers' efforts to find employment and better equip employment services and policy makers to

support them.

#### 4.2.2 Formal Vs Informal Channels

Several researches underline the importance of search strategies used by job seekers and their effectiveness in terms of good matches and reducing unemployment duration (Mortensen, 1987, Devine and Kiefer, 1993). Along with the traditional job search channels (the formal ones : institutional intermediaries and market channels), other alternative methods of job search are the use of Internet but also social networks. The latter appears to be more popular during a recession period characterized by high unemployment rates (Kramarz and Skans, 2014).

Both, the job seekers and firms may prefer referral hiring, not only for its lower costs, but as it reduces the unobserved characteristics of worker's productivity and job attributes. Findings rarely disagree the fact that social networks are a better in transmitting information than formal methods. Differently, Bortnick and Ports (1992) find that, although unemployed job seekers often use direct applications, the highest probability of finding a job is noticed for those who mobilize the private employment agencies. Addison and Portugal (2002), argue that the public employment offices are less efficient and lead to lower wages and shorter contracts.

Osberg (1993) notices that search channels change with the business cycle and he underlines a sample selectivity in the choice of job search strategies (mainly for those who use the public employment agencies). Fougère et al. (1998) consider the role of the French national employment office ("Pôle Emploi" in France) on the exit rate out of unemployment. These two studies underline a significant impact of recruitment intermediaries on the probability of finding a job by considering only one type of intermediaries, which is the institutional one (either public or private) competing with the market procedures.

Other researches argue that the combination of several job search procedures not only lead to some disparities in terms of information quality and quantity, but also affects search

cost and the vacancies generating process (see Autor, 2001, Freeman, 2002, Fountain, 2005).

Sabatier (2002), inspired by Barron and Mellow (1979), suggests a structural job search model as a function of search methods used with endogenous intensity. Sabatier (2002), introduces search channels through a function of information production, which affects both the offer arrival rate and search costs. The author underlines that search methods have a discriminating effect on unemployment duration, but also notices different effects of the production of information on unemployment spells given the job type obtained.

Holzer (1988), studies a job search model where he argues that the choice of the search strategy depends on its relative cost and expected productivity as well as the monetary and non-monetary attributes of its associated job offers. However, Bachmann and Baumgarten (2013) conclude that expected benefits from choosing the informal channel (social networks) are more likely to determine the choice of using this specific channel, rather than its low cost. The empirical evidence shows that the most frequently used search methods (personal contacts and direct applications) are the most productive as they provide access to jobs.

We believe that studying which characteristics affect directly the job search intensity, should give us more information on how unemployed young job seekers try to quit this status and how on-the-job seekers look for a new job. Thus, the search intensity is the result of a choice procedure from the job seeker's side depending on his/her individual characteristics, however this parameter alone is not enough to characterize search behaviour. For this reason, the analysis of preferences over working hours of the job sought, as well as the choice of the job search channels are studied.

## 4.3 Data and Descriptive Statistics

### 4.3.1 Data

We use same data from the Insee-EEC for the year 2010 as in the previous chapters. We restrict our sample to the population of age 15-30 who are active at the time of the survey to abstract from issues related to youth job search practices. The advantage of our data set is that it asks questions to both employed and unemployed respondents about their job search process. This allows us to compare observed characteristics of employees who do or do not search for a new job, as well as unemployed job seekers. However, one weakness of this data set to be mentioned, is the absence of questions addressed to the employed in order to get information about the search methods they used before getting the current job.

It is to mention that we are only interested into the job search practices of both employed and unemployed individuals. We define job seekers in the EEC as those who : (1) are looking for paid employment ; (2) have looked for work in the last four weeks ; and (3) mention at least one method of job search. The self-employed, people in training programs, unpaid family workers and inactive people (about 46.20% of all young job seekers) are excluded from our analysis.

### 4.3.2 Descriptive Statistics

The sample counts initially 94 421 young individuals, we only keep the active population (53.80%) and we discard the inactive individuals (the NEET : Not in Education, Employment or Training 8.32%, and students 37.88%) classified as out of the labor force as they are by definition not looking for a job.

The total number of observations left is equal to 49 833 young active individuals. Table 4.1 shows the proportion of the unemployed and employed among the job seekers available in our data. Our sample consists of 8.301 unemployed individuals (16.66% of the total

TABLE 4.1 – Number of job searchers in our sample

Labor market status	Active (N)	Active (%)	Searching (N)	searching (%)
Employed	41,532	84.44%	3,003	26.57%
Unemployed	8,301	16.66%	8,301	73.34%
Total job searchers	49,833	100%	11,304	22.68%

Enquête Emploi 2010, author's calculations. Weighted statistics.

sample) and 41.532 employed individuals. It is though important to underline that among those who are employed at the time of the survey, 7.23% (3003) are looking for a job and have practiced at least one search procedure during the last 4 weeks before the survey date. This information is important to our empirical approach since we have to take into account the presence of on-the job searchers in our sample.

TABLE 4.2 – Proportion of people searching for a job

	Men		Women		Total
Employed not searching	93.84		92.32		78.17
Employed searching	6.16	25.92	7.68	30.30	6.84
Unemployed searching		74.08		69.70	14.99
Total	100	100	100	100	100
Observations	22,231	5929	19,301	5375	49,833

Enquête Emploi 2010, author's calculations. Weighted statistics.

Table 4.2 summarises job search status of the survey respondents by gender. It shows that, 6.84% of employees engage in on-the-job search (consistent with Pissarides and Wadsworth (1994)) with slight difference between men and women (respectively 6.16% and 7.68%).

Table 4.3 shows clear differences between types of job seekers in terms of preferences over working hours. We notice that more than a half of the employed JS prefer looking for

TABLE 4.3 – Preferences over working hours by employment status

Preference for :	Employed searching	Unemployed searching	Total
Full-time only (\%)	63,31	33,34	43,34
Full-time if not partime (\%)	28,08	58,06	48,04
Part-time if not full-time (\%)	8,61	8,60	8,62
Total	100	100	100
Observations	3.000	8.300	11.300

Enquête Emploi 2010, author's calculations. Weighted statistics.

a full-time job only, while it is the case for only 33% of the unemployed. However, these latter are 58% to say they may look for a part-time if no full-time jobs are available. In the light of this stylized fact, it is possible to assume that unemployed are forced to find a job as quickly as possible. Since they may feel they are in a much worse position than the employed job seekers, they choose to be less demanding on the type of employment sought.

Job seekers also differ in terms of the main job search methods used<sup>1</sup> (See table 4.4). Responding to advertisements is the main method of 79.23% of employed job seekers looking for a new job and 88.67% of unemployed people. A larger proportion of unemployed than employed job seekers use public job centres (69.63% compared with 34.76%). Direct approach to employers is used with the same frequency by the employed and unemployed job seekers (respectively, 66.04% and 66.84%); similar proportions ask friends or relatives (60.31% compared with 61.77%).

Given the results of table 4.4 above, we can conclude that several individuals combine more than one or two procedures while searching. The most popular method, for both employed and unemployed, is to respond to/publish a newspaper job advert. The second search channel used by the unemployed is the public employment office.

1. The channel "Self-employment" is solicited by only 2.01% of the job seekers. This channel is very particular and we can not consider it as a job search method, as it is more related to administrative procedures than to job search procedures.

TABLE 4.4 – Job search methods by labor market status

Job search method :	Employed searching	Unemployed searching	Total
Public employment agencies	34,76	69,63	66,62
Private employment agencies	26,55	38,1	34,86
Job adverts	79,23	88,67	86,02
Direct applications	66,04	66,84	66,62
Social networks	60,31	61,77	61,36
Other channels (use anything else)	32,55	26,8	28,41
Observations	3,003	8,301	11,304
Total	26,57%	73,43%	100%

Enquête Emploi 2010, author's calculations. Weighted statistics.

Moreover, the mean of job search methods employed by job seekers is equal to 4.64 (almost near to the median which is equal to 5 which shows a distribution almost symmetric of the use of search channels). This result is quite interesting, as most of the empirical literature underlines that the most successful job search channels in terms of providing access to jobs are both the direct applications and the social networks. The fact that social networks figure as the fourth channel used by unemployed job seekers, while it is the third one for on-the-job searchers, induces three possible interpretations :

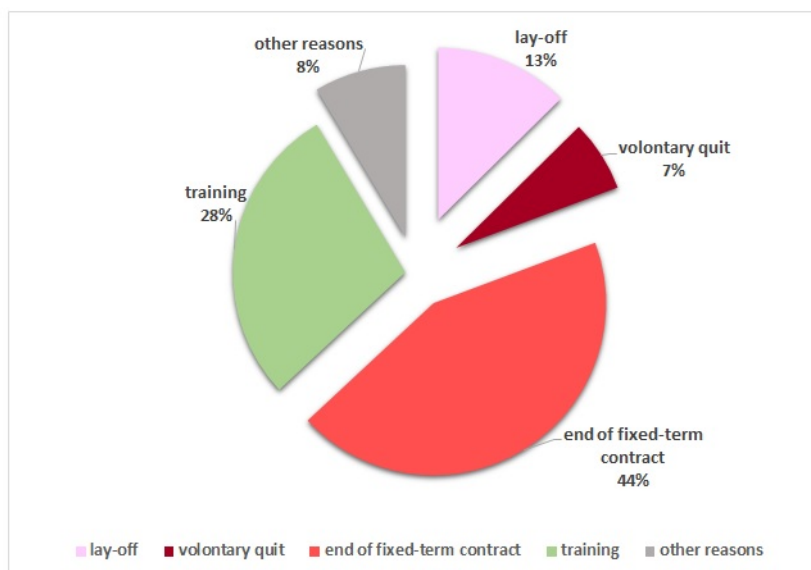
The first interpretation that we can draw is that unemployed job seekers may believe that job adverts or public employment offices are more reliable, as both channels provide a "data-set" of existing offers and applicants are invited to apply for job offers if they consider these offers to be "adequate" for their types. While 43.43% of the unemployed are registered as job seekers in public jobcenters and 20.24% benefit from unemployment benefit, this group of individuals must apply for job offers suggested by the public service, otherwise they might lose this monetary advantage.

The second possible conclusion, is that job seekers might be less involved into searching via social networks as they are not sure that the social contact will refer him/her to a potential recruiter. Equally, sending direct job applications might seem more costly

compared to job ads or public employment offices, as the applicant is not certain of the availability of vacancies. A third explanation could be that unemployed individuals are more prone to have poor contacts, thus, poor social networks, that is why they prefer to be accompanied during their search process by formal employment intermediates (public and private agencies).

When they were asked about the reason why they were jobless : almost 44% of unemployed job seekers reported they achieved the end of their fixed-term contract, while 13% have been laid off and almost 7% left voluntarily their last jobs. A proportion of 28% have not entered to the labor market yet, as they were in the school system and 8% are unemployed for other circumstances (see figure 4.1 bellow). Therefore, 20.24% have an unemployment benefit and have been unemployed for more than 10 months on average until the date of the survey. These individuals spent on average, almost 360 days (almost a year, while median = 213 days)) searching for a job opportunity (See table 4.5).

FIGURE 4.1 – Unemployment circumstances



Source : Enquête Emploi 2010, author's calculations. Weighted statistics.



Table 4.5 summarizes the main explanatory variables used in our first estimation. The variable describing the highest educational level takes 4 values according to the highest diploma obtained by the unemployed job seeker at the time of the survey (see Aeberhardt et al. (2011)). In this analysis, the education level is coded (1) if any diploma  $<$  Bac ( $<$  High school degree), (2) if low education ( $=$  Bac), (3) if average education ( $=$  Bac+2/3) and (4) if high education ( $\geq$  Bac +4). We notice that young unemployed left in the sample are relatively less qualified as only 9.99% achieved **high education** : Bachelor Degree, Business or Engineering Master, Phd and only 8.12% attained **average education** : Higher National Diploma and the Diploma of Higher Education (BTS/DUT and the DEUG/DEUST). Nevertheless, a higher proportion (21.62%) is graduated at level **low education** : French general secondary education certificate (BAC) and 60.28% stopped at **no diploma** : without diplomas or achieved at most the vocational aptitude and vocational education certificate (CAP/BEP).

TABLE 4.5 – Variables descriptive statistics

<b>Variables</b>	<b>%</b>
<b>Individual characteristics (in %)</b>	
Women	46.52
With partner (living in couple)	29.78
Not french :	11.11
Mean age	23.71
Children : if any	19.46
<b>Housing type</b>	
Free housing : living with parents	1.81
Owner of the house	28.71
Social housing	28.57
Private rent	40.90
<b>Education level</b>	
No diploma (< Bac)	60.28
Low education (Bac)	21.62
Average education (Bac+2/3)	8.12
High education ( $\geq$ Bac+4)	9.99
<b>Unemployment specific variables</b>	
Registered as a job seeker	43.43
Unemployment benefit	20.24
<b>Unemployment duration</b>	
<i>Unemployment &lt; 6m</i>	45.56
$6 \leq \text{Unemployment} < 11m$	20.80
<i>Unemployment <math>\geq 11m</math></i>	33.63

Source : Enquête Emploi 2010, author's calculations.

Overall, these descriptives suggest differences between employed and unemployed job seekers in terms of the type of job sought and search methods used, which we now investigate more rigorously. In what follows we focus on the methodology adopted in the empirical analysis in order to study the job search strategies and intensity of on-the-job and out-of-the-job young seekers in France.

## 4.4 The Econometric Methodology

Our estimation strategy involves five distinct steps. The first examines factors associated with employees engaging in on-the-job search, while the second examines factors associated with being an employed rather than an unemployed job seeker. In the third step we look for the preferences for different types of job (part- or full-time). In the fourth step we examine whether employed and unemployed job seekers employ the same job search intensity. Finally, the fifth step looks at the search strategies used among the job seekers. These models are estimated using the EEC for the year 2010.

### 4.4.1 Modelling Strategy : Who Searches On the Job ?

First, in order to analyse the determinants of searching on-the-job we use a probit model *conditional on being employed* where the dependent variable  $y_i$  equals one if the employed worker (i) is searching for a job and 0 if not searching. The model is specified as follows :

$$y_{i}^{*} = X_i\beta_1 + W_i\beta_2 + UR_i\beta_3 + REG_i\beta_4 + \epsilon_i \quad (4.1)$$

Where  $y_{i}^{*}$  denotes the propensity for the employed workers to search for a new job. Explanatory variables include both individual ( $X_i$ ) and job related characteristics ( $W_i$ ). Individual characteristics include age, gender, nationality (French or not), household structure and education. Job characteristics include employment type (fixed-term, temporary

or permanent), sector (private or public), occupation type (10 alternatives), job tenure (in months), wage and the job access channel through which the worker found his current job.

The models also include two variables indicating the place of residence. The first, is a dummy indicating if the worker lives in an urban area ( $UR_i$ ), and the second indicates the region of residence<sup>2</sup> ( $REG_i$ ) (22 regions). These capture local labour market conditions which we expect to influence the decision to engage in on-the-job search. A dummy for the entry year to the current job is also included (before or after 2008). In this sense, this variable captures the effect of the last recession on the willingness to change the current job by searching a new one.

#### 4.4.2 Modelling Strategy : Differences Between Employed and Unemployed Job Seekers

The second model analyses factors associated with being an employed rather than an unemployed job seeker estimating a probit model *conditional on job search*. Here the dependent variable  $Z_i$  equals one if the the job seeker is employed, and 0 if unemployed. The model is specified as follows :

$$Z^*_i = X'_i\alpha_1 + UR_i\alpha_2 + REG_i\alpha_3 + \xi_i \quad (4.2)$$

Where  $Z^*_i$  denotes the unobservable propensity for a job seeker to be employed. Explanatory variables include individual characteristics and the place of residence indicators (region and living in an urban area), length of job search, registration as job seekers (JS) in public job centres, receipt of unemployment benefit.

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2. Considering the regional differences is important, Robson (2001) argues that regional variations in leaving unemployment are usually due to differences in the relative competitiveness of unemployed job seekers rather than in regional variations in hirings (Longhi and Taylor, 2011).

### 4.4.3 Modelling Strategy : Preferences over working hours

The third estimation investigates whether job seekers, whether on-the-job or unemployed, have similar preferences in terms of working hours. We use a multinomial probit model in which the dependent variable takes one of the following three states : 1 = preference for only a full-time job, 2 = preference for a full- if not part-time job, or 3 = no preference, via the latent variable  $P^*_i$  :

$$P^*_i = X'_i\gamma_{1j} + STATUS_i\gamma_{2j} + \eta_{ij} \quad (4.3)$$

Where  $\eta_{ij}$  are i.i.d. and follow a multivariate normal distribution. The probability of observing individual  $i$  having preference  $j$  is the probability that  $P_{ij} > P_{iq}$  for each  $j \neq q$ . Explanatory variables include the individual characteristics (similar to equation 4.2). Differences between job seekers are captured using variables identifying whether a respondent is employed job seeker or unemployed job seeker ( $STATUS_i$ ). With unemployed being the reference group.

### 4.4.4 Modelling Strategy : Search behaviour of employed and unemployed job seekers

#### 4.4.4.1 Modelling the choice of job search intensity

In this part of our empirical analysis, we investigate the job search intensity, which can be measured by the time devoted to search (Krueger and Mueller, 2008), the number of contacts per period or the number of search methods used (Devine and Kiefer, 1991). As information on the time devoted to search per day/week and the number of job contacts received by search channel are not observable in the *Enquête Emploi en Continu (EEC)* survey, the one we retained for our analysis, is the last indicator : number of search procedures mobilized (Holzer (1988) ; Sabatier (2002) ; Weber and Mahringer (2008) ; Bachmann and Baumgarten (2013)). The latter can be equal to 0, 1, 2, ..., 12 possible channel(s). Individuals who reported 0 as the number of channels, are employed but not engaged in

a search procedure at the time of the survey. In this case, one should use a sequential discrete choice model that recognizes the ordering of the data, such as ordered Logit or Ordered Probit because of the discrete and ordinal character of our dependent variable (the number of channels used (see Cameron and Trivedi (2001))<sup>3</sup>. The dependent variable is called "intensity".

However, applying for a job while having one is a possible feature when the worker is not satisfied at his current position for a given reason (it could be wage, work conditions, distance-to-work, lack of career perspective, etc.). It is to mention that "intensity" in our data is coded 0 if the individual has a job but not searching for a new one.

- intensity0 if the number of methods used is = 0
- intensity1 if the number of methods used is = 1 or 2
- intensity2 if the number of methods used is = 3
- intensity3 if the number of methods used is = 4
- intensity4 if the number of methods used is = 5
- intensity5 if the number of methods used is  $\geq 6$  methods

We estimate the parameters of an ordered probit model for the outcome of job search intensity (intensity)<sup>4</sup>. Age (and  $age^2$ ), education, the last occupation, nationality (French or not), length of job search, household structure, place of residence are used as explanatory variables.

An additional and relevant explanatory variable also included, is the labor market status of the job seeker, i.e., whether he is employed or unemployed. This latter will allow us to draw interesting evidence about differences in terms of job search behaviour (intensity

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3. Now, if we assume that "intensity" is a count variable, then we should run a negative binomial regression as Poisson regression does not allow for overdispersion in our case (Variance is larger than the mean). Cameron and Trivedi (2001) underline that count data can be modeled by discrete choice model methods, possibly after some grouping of counts to limit the number of categories.

4. We also estimate differently this model, using an ordered probit model with sample selection à la Heckman (1979) to check if there is a sample selection bias. We find no significant differences and the mills ratio was not significant suggesting no selection bias.

and strategies) among job seekers conditional on their labor market status.

#### 4.4.4.2 Modelling the choice of job search strategy

In this last part of our empirical methodology, we study the determinants of young job search strategies. Since the variables of interest are the job search channels used to look for a job. These variables are 6 dummies : job application and responding/sending a job advert (as direct), public jobcenters (as public), private jobcenters (as private), personal and professional relations (as social network), job examinations and other channels (gathered as "other").

One could suggest to estimate a serie of six probit models, each estimates the probability of using one channel. However, we choose to adopt a different approach instead, and we estimate a Multivariate Probit model. The suggested model is quite similar to the trivariate probit model (Greene, 1996) but adapted to situations where the number of equations exceeds three. The multivariate probit model allows us to estimate the probability of choosing a given channel taking into account that it may be combined with one or more other channels.

Estimating the six equation system is then equivalent to study all the strategies (Greene, 2008). We use Cappellari and Jenkins (2003) simulated maximum likelihood approach. As correlation terms between search channels' choices are estimated, we can calculate joint probabilities corresponding to all possible combinations of choosing or not each channel.

Consider the 6-equation multivariate probit model :

$$y_{im}^* = \beta'_m X_{im} + \epsilon_{im}, m = 1, \dots, 6; i = 1, \dots, N \quad (4.4)$$

With  $\epsilon_{im}$ , are error terms distributed as multivariate normal, each with a mean of zero, and variance-covariance matrix  $V$ , where  $V$  has values of 1 on the leading diagonal and correlations  $\rho_{jk} = \rho_{kj}$  as off-diagonal elements. The log-likelihood function for a sample of  $N$  independent observations depends on the multivariate standard normal distribution

function (see Cappellari and Jenkins, 2003).<sup>5</sup> It be should also noted that :

$$y_{im} = 1 \text{ if } y_{im}^* > 0, \text{ and } y_{im} = 0 \text{ otherwise} \quad (4.5)$$

We focus attention on job search channels' choice, taking into account their potential combination. Thus, we jointly estimate the channels choice equations, that is the following system of equations :

$$\left\{ \begin{array}{l} Direct_i = \beta'_1 X_{i1} + \epsilon_{i1} \\ Network_i = \beta'_2 X_{i2} + \epsilon_{i2} \\ Private_i = \beta'_3 X_{i3} + \epsilon_{i3} \\ Public_i = \beta'_4 X_{i4} + \epsilon_{i4} \\ Ads_i = \beta'_5 X_{i5} + \epsilon_{i5} \\ Other_i = \beta'_6 X_{i6} + \epsilon_{i6} \end{array} \right. \quad (4.6)$$

Errors of each of these 6 equations are then distributed conjointly and the coefficients  $\rho_{jk}$  reflect the correlations between the error terms of our 6 equations of job search channel's choice. The choice of a search method or using it simultaneously with additional methods, depends on job seeker's individual characteristics, place of residence (regions and dummy for urban area), the education level, search duration (short, average, long). Specific variables related to the the search status, are also included and are 2 dummies : one indicating if the individual has unemployment benefit, the other, if he/she is registered in the public jobcenter as a job seeker.

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5. The most popular simulation method for evaluating multivariate normal distribution functions is the Geweke-Hajivassiliou-Keane (GHK) smooth recursive conditioning simulator. The GHK simulator exploits the fact that a multivariate normal distribution function can be expressed as the product of sequentially conditioned univariate normal distribution functions, which can be easily and accurately evaluated (Cappellari and Jenkins, 2003).



An additional and relevant explanatory variable also included, is the labor market status of the job seeker, i.e., whether he is employed or unemployed. This latter will allow us to draw interesting evidence about differences in terms of job search behaviour (intensity and strategies) among job seekers conditional on their labor market status.

## 4.5 Empirical Results

### 4.5.1 Who Searches On the Job ?

We first examine factors associated with employees searching for a job (equation 4.1). Table 4.6 reports estimation results. Pissarides (1994) suggests that workers who engage in on-the-job search are in worse jobs, with lower wages and less permanent positions than those who do not search. If so, then differences between employed and unemployed job seekers do not merely reflect differences between employed and unemployed people in general (Longhi and Taylor, 2014). In order to analyse the determinants of searching on-the-job we use three estimation approaches. The first is to estimate a simultaneous equation model of being employed searching or not, wage regression, access channel equation and contract type equation, using CMP model (Model 1). This model handles with endogenous covariates as well as selection on employment, and allow to correct for it. Second, we estimate a probit model conditional on being employed with endogenous covariate where only wage is endogenous (Model 2). The third model is a simple probit model conditional on being employed where no predictors are supposed endogenous (Model 3).

First, the estimation of Model 1 (simultaneous equation estimation of being employed searching or not, wage, access channel and contract type equations) shows that none of these variables is endogenous for the probability of being an employee searching rather than employee not searching (the structural model). Results show that errors of each of these equations are not significantly correlated with the error term of the structural model. Second, the results after estimating Model 2, lead us to conclude that we should accept

the exogeneity hypothesis of the monthly wage (exogeneity test not significant at 10%).

Hence, we come up with the conclusion that the most appropriate model is the probit model conditional on being employed (Column 3).

Consistent with the literature, the probability of engaging in on-the-job search falls significantly with wages and job tenure. The presence of dependent children and living with partner do not seem to affect the probability of searching for a new job among the employed job seekers. For both men and women, the probability of looking for a new job increases with education consistent with Longhi and Taylor (2014) and decreases with being non French employees. This means that the highest is the education level, the highest is the intention to leave the current job, possibly after realising the mismatch between the job requirements and own skills. This finding is counter-intuitive as one should expect that the highest is the education level the highest is the satisfaction at the current job and the lowest is the probability of a possible skills-mismatch. Moreover, we show that having a temporary or a fixed-term job (Atypical job) increases the probability of engaging in on-the-job search as compared to employees holding a permanent job.

The latter two results confort our previous finding in the Chapter 3 of this thesis. In the one hand, we have already emphasized the positive influence of education on the probability of being dissatisfied with the current job with regards to non-monetary job facets. In the other hand, we also showed in this same chapter that the probability of being dissatisfied with the current job decreases with regards to all dimensions of the job attributes as compared with the job security dimension. We have then came up with the conclusion that, either temporary jobs are not able to provide permanent employments at the current firm, or these type of job contracts consist in a stepping stone to permanent employments outside the current firm (possibly after enhancing own social network and self-confidence).

Since, temporary employment may play the role of stepping stone to permanent employment outside the current firm, one might think about the possibility that these nonstandard employments might offer to working youth the opportunity to enhance, not only their wor-

TABLE 4.6 – Determinants of on-the-job search

	Model 1		Model 2		Model 3	
Men with children	-0,084	-0,650	-0,025	-0,330	-0,019	-0,250
Women without children	-0,117	-1,470	0,047	0,890	-0,042	-0,880
Women with children	-0,065	-0,560	0,093	1,240	-0,068	-0,960
Urban (Ref.rural)	-0,216**	-2,580	-0,019	-0,380	-0,038	-0,730
With partner (Ref.single)	-0,032	-0,460	-0,014	-0,300	0,038	0,890
Non French (Ref.French)	-0,242*	-1,840	-0,207**	-2,500	-0,274***	-3,270
Low education (Ref.no diploma)	0,307***	3,680	0,155***	3,040	0,185***	3,650
Average education (Ref.no diploma)	0,375***	3,270	0,154**	2,060	0,280***	4,480
High education (Ref.no diploma)	0,657***	4,910	0,283***	3,120	0,477***	7,640
Fixed-term contract (Ref.permanent)	0,192**	2,250	0,299***	4,82	0,267***	5,290
Temporary job (Ref.permanent)	0,303*	1,910	-0,099	-0,74	-0,265***	-2,930
Public sector (Ref.private)	-0,142	-1,440	-0,088	-1,500	-0,080	-1,340
Tenure (in months)			-0,005***	-4,82	-0,006***	-4,78
Wage/lnwage	0,000	0,050	0,271	1,440	-0,413***	-10,170
Social net (Ref.direct app.)	-0,091	-1,190	0,053	1,230	0,047	1,060
School net (Ref.direct app.)	-0,209		-0,306***	-3,290	-0,311	-3,260
Public agencies (Ref.direct app.)	0,158	1,150	0,209***	3,230	0,186***	2,810
Private agencies (Ref.direct app.)	0,211	0,990	0,262**	2,200	0,359***	3,030
Other channels (Ref.direct app.)	-0,137	-0,870	-0,106	-1,210	-0,082	-0,920
Entry after crisis (Ref.before 2008)	0,163**	2,220	0,139***	2,950	0,085*	1,930
$\rho_{wage}$			-0,171	-1,67	-	-
Observation	33,335		11,175		11,175	
Log-likelihood	-50264,815		-8044,0195		-2688,9328	
$\chi^2$	12187.76		280.30		397.73	
Degree of Freedom	294		49		50	
Wald test of wage exogeneity			$\chi^2(1)= 2.80$		-1.67	

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Model 1 is CMP. Model 2 is IVPROBIT. Model 3 is a Probit.

Note :Reported results are coefficient of each explanatory variable's effect on the probability of being on-the-job searcher. Z values are reported next to each coefficient. Additional explanatory variables are the function type (10 alternatives) and the region of residence (22 regions).

Source : Enquête Emploi 2010, author's calculations. Weighted statistics.

king experience but also their social networks. A more despondent interpretation could be that workers may accept these nonstandard jobs in order to escape unemployment, even though they would prefer permanent jobs.

Similarly, employees hired at the firm after the last recession are more likely to search for a new job which is consistent with our findings in the previous chapter. Hence, since employees hired after the recession are more likely to be dissatisfied because of the job mismatch, they are likely to be hired in atypic jobs rather than permanent and secure employments in addition to the wage penalty associated to finding a job after the economic crisis.

In conclusion, these results suggest that, consistent with theory, on-the-job seekers are in worse jobs than employees not searching. They are more likely to be in temporary or fixed-term contract, hired in low-paid jobs, with low seniority and obtained their employment through formal employment intermediates (job centres either public or private) as well as if the job was found after the last recession has occurred.

#### **4.5.2 Differences Between Employed and Unemployed Job Seekers**

We analyse factors associated with being an employed rather than an unemployed job seeker using a probit model conditional on search (equation 4.2). Estimation results are reported in table 4.7. These show that the probability of being an employed rather than an unemployed job seeker is lower if living with partner for both men and women (strongest negatif effect for male workers).It also decreases with the education level as compared to unemployed job seekers. The latter is consistent with studies of recruitment behaviour, which find that one of the reasons why the unemployed do not get a particular job is that they do not meet the job requirements in terms of qualification and experience levels (see for example Gorter et al. (1993)).

First, it appears clearly that having dependent children matters only for women since

family responsibilities increase the probability for women to be employed job seeker. However, no significant influence of fatherhood on being employed rather than unemployed job seeker.

Second, the comparaison of employed and unemployed job seekers, shows that unemployment benefits and registration at public job centres as job seeker and living in an urban area (dynamic employment areas) imply same effect : high probability of searching on-the job rather than out of the job. It is to mention that, the monitoring dedicated to unemployment benefits recipients in OECD countries, represents an increasingly important policy mean (see OECD (2000) for a survey). In practice, eligibility criteria are often harsher, and monitoring is more intense, if the individual has more favorable labor market opportunities (Van den Berg and Van der Klaauw, 2006).

However, the examination of the job search duration's effect shows that long-term job search duration is synonomous with decreased probability of searching while having a job rather than while jobless.

However, we find that the probability of being an employed JS falls with the length of the job search spell. This suggests that employed JS are more prone to search for short periods while the unemployed tend to search for longer and that competition between them falls with the length of job search duration. This finding is consistent with the results emphasized by Longhi and Taylor (2014).

TABLE 4.7 – Difference between unemployed and employed job searchers

Base : Unemployed JS	All	Women	Men
Children (if any)	-	0.182***	-0,058
		3.75	-0,73
With partner (Ref.single)	-0,330***	-0,257***	-0,441***
	-10,024	-6,103	-8,358
Low education (Ref.No diploma)	-0,463***	-0,423***	-0,514***
	-13,628	-8,881	-10,465
Average education (Ref.No diploma)	-0,733***	-0,799***	-0,643***
	-16,302	-12,890	-9,693
Higher education (Ref.No diploma)	-0,807**	-0,796***	-0,798***
	-19,518	-13,760	-13,422
Registered as JS in the public office	0,485***	0,335***	0,611***
	14,639	7,347	13,158
Unemployment benefit	0,488***	0,505***	0,491***
	10,615	7,865	7,402
Mid-term job seeker (Ref.short-term)	-0,003	-0.006	0.006
	-0,071	-0.10	0.11
Long-term job seeker (Ref.short-term)	-0,141	-0.174***	-0.122***
	-4,445	-3.88	-2.69
Urban Areas	0,313***	0,253***	0,378***
	6,918	3,914	5,882
$\chi^2(33)$	1718,927	718,899	1022,456
Observations	11,301	5,374	5,927
Log likelihood	-5680.3583	-2874.3083	-2779.6149

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Note : The model is a probit estimation of the probability of searching for a job among unemployed and employed job seekers. Reported results are coefficient of each explanatory variable's effect on the probability of being on-the-job seeker (JS) rather than unemployed JS. Z values are reported below each coefficient. Additional explanatory variables are the region of residence (22) and dummies for women, with partner and non French.

Source : Enquête Emploi 2010, author's calculations. Weighted statistics.

### 4.5.3 Preferences Over Working Hours

If we assume that employed and unemployed job seekers have different job preferences, then one could imagine that they would unlikely to rival directly for the same types of employments. Following this line of thought, this part of the chapter investigates the job seekers' preferences either for full-time, part-time or both types of working arrangements (equation 4.3). Table 4.8 and 4.9 report the estimation results.

First, it should be noted that studying job search strategies comparing employed and unemployed should also enhance our understanding of preferences with regard to work arrangements. Employment preferences concern many aspects of the individual's life. For instance, preferences affect actual participation. One's willingness or not to participate to the labor market may affect, among other things, the number of hours worked, the occupation type and the career's prospects. Moreover, a worker may find himself dealing with a trade-off between career evolution at the activity that he/she is/will be engaged in, and spending more time with children at home.

Our findings underline that, unlike fatherhood, motherhood or being a childless women imply lower preferences for full-time jobs as compared to childless male workers. This result implies two possible interpretations. The first is that female JS with dependent children might be less demanding in terms of job opportunities, thus are, may be opened to the full- if not part-time option. The second interpretation is that this work arrangement could be advantageous for working mothers as it offers them more free time devoted to family responsibilities.

This finding is consistent with multiple empirical evidence such as a recent report of the Pew Research Center Survey (2012) for the U.S.<sup>6</sup>. This latter report argues that, for most American mothers, part-time work would be their ideal work situation, preferred over full-time work or not working at all outside the home.

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6. <http://www.pewresearch.org/fact-tank/2013/08/19/mothers-and-work-whats-ideal/> (last visit 05/04/2016).

TABLE 4.8 – Preferences over working hours

	Model 1		Model 1 by gender			
	All the sample of job seekers		Men job seekers		Women job seekers	
Base : Full- if not part-time	Only full	Only part	Only full	Only part	Only full	Only part
age	0,055***	-0,004	0,061***	-0,019	0,045***	0,006
	9,33	-0,51	7.75	-1.40	5.01	0.55
Children (if any)			0,154	-0,047	-0,162*	0,747***
			1.57	-0.26	-2.28	9.09
Men with children	0,229**	-0,057				
	2,66	-0,36				
Women without children	-0,321***	0,249***				
	-7,89	4,3				
Women with children	-0,527***	10,11***				
	-8,38	14,37				
Non French	-0,219***	-0,079	-0,212*	-0,096	-0,250**	-0,061
	-3,61	-0,96	-2.55	-0.67	-2.78	-0.59
Urban (Ref.rural)	0,061	0,224**	0,093	0,052	-0,004	0,307**
	1,15	2.94	1.23	0.42	-0.06	3.10
Registered as JS in public office	-0,33***	-0,487***	-0,321***	-0,672***	-0,328***	-0,407***
	-8,06	-8.29	-5.76	-6.39	-5.36	-5.49
Unemployment benefits	0,314***	-0,223**	0,375***	-0,225	0,211**	-0,231*
	6,03	-2.63	5.35	-1.43	2.65	-2.19
Intercept	-0,615***	-10,51***	-0,947***	-0,695*	-0,432	-10,74***
	-3,86	-6.70	-4.49	-0,695	-1.80	-5.87
$\chi^2(76)$	1846.44		861		841	
log-likelihood	-9383.877		-4521.894		-4767.361	
Observations	11,300		5,926		5,374	

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%

Note : The model is a multinomial probit estimation of the preferences over the working hours among unemployed and employed job seekers. Reported results are coefficient of each explanatory variable's effect. Z values are reported below each coefficient. Additional explanatory variables is the region of residence (22 regions) and the search duration in days.

Source : Enquête Emploi 2010, author's calculations.



TABLE 4.9 – Preferences over working hours (continued)

	Model 1		Model 1 by gender			
	All the sample of job seekers		Men job seekers		Women job seekers	
Base : Full- if not part-time	Only full	Only part	Only full	Only part	Only full	Only part
No diploma						
unemployed JS	-0,843***	-0,312***	-0,880***	-0,735***	-0,820***	-0,0234
	-13,26	-3,38	-10.14	-5.18	-8.63	-0.19
Low education						
employed JS	0,269**	0,452***	0,310*	0,620***	0,262*	0,381*
	3,04	3,7	2.37	3.30	2.14	2.36
unemployed JS	-0,823***	0,050	-0,955***	-0,134	-0,709***	0,204
	-11,15	0,49	-9.17	-0.85	-6.70	1.51
Average education						
employed JS	0,282**	0,254	0,24	0,438	0,356*	0,196
	2,65	1,68	1.46	1.83	2.50	1.00
unemployed JS	-0,729***	-0,293*	-0,837***	-0,447*	-0,637***	-0,17
	-7,79	-2,1	-6.41	-1.99	-4.69	-0.94
Higher education						
employed JS	0,476***	0,467***	0,554***	0,608**	0,449***	0,405*
	4,87	3.37	3.79	2.81	3.33	2.24
unemployed JS	-0,542***	-0,137	-0,580***	-0,0976	-0,474***	-0,163
	-6,02	-1.02	-4.57	-0.48	-3.67	-0.91
$\chi^2(76)$	1846.44		861		841	
log-likelihood	-9383.877		-4521.894		-4767.361	
Observations	11,300		5,926		5,374	

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Note : The model is a multinomial probit estimation of the preferences over the working hours among unemployed and employed job seekers. Reported results are coefficient of each explanatory variable's effect. Z values are reported below each coefficient. Additional explanatory variables is the region of residence (22 regions) and the search duration in days.

Source : Enquête Emploi 2010, author's calculations.

Moreover, using an international statistical comparison, Evans et al. (2000) emphasize that despite the disadvantageous of the part-time employment, there seems to be a substantial latent demand for this specific work arrangement among women and, to a much lesser degree, for men, even after taking into account the loss of income that it might imply. Most part-time working women in Europe, say they choose this work arrangement voluntarily. In addition, women in part-time seem to express higher level of job satisfaction than those working full time (the opposite is true for men) (Evans et al., 2000).

Although there is a substantial latent demand for this specific work arrangement among women as they seem satisfied to compromise in terms of compensation, future income and job security to benefit from flexible working time adapted to family life. However, a recent OECD report (OCDE, 2010), points out several negative effects of part-time work as it appears that for other part-time workers, these benefits are not sufficient to offset the disadvantages, at least at the professional satisfaction scale.

With regards to the job-search specific variables effect on the preference over working hours, we notice that registration at the public jobcenters as a job seeker, decreases the probability of claiming either only full-time or only part-time job. This means that these type of workers are less demanding and more likely to prefer staying opened to both arrangements. However, the unemployment benefit recipients appear more categorical in terms of preference for full-time employment but they are willing to consider part-time employment in the case of lack of full-time job opportunities. Hence, full-time job seekers are more likely to broaden their preferences for both work arrangements, whilst accepting a part-time job as a last resort as a stepping stone to a full-time job. Following this line of thought, unemployed workers search for part-time as well as full-time jobs and accept the first offer that comes along.

This is why it is important to study the effect of the labor market status on the probability of preferring either full-time, part-time or both work arrangements. We compare job seekers preference over working hours according to the search status (employed or unemployed) interacted with the education level (not, less, average or highly-educated). The

estimated effects in table 4.9 are similar across levels of education. Employed job seekers looking for a new job have a strong preference for full-time jobs, such men are significantly more likely than unemployed men to prefer searching for a full-time job. Being unemployed increases the probability of having no preference between part- and full-time jobs (the reference category). These findings are in line with Longhi and Taylor (2011) who emphasize the idea that the unemployed might be more likely than on-the job seekers to apply for and accept "bad" jobs and, thus, these two types of workers are not likely to be in direct rivalry.

#### **4.5.4 Job-Seekers Search Behaviour**

If employed and unemployed job seekers have different job preferences they are unlikely to have same search intensity or to directly compete using the same methods of job search. In order to examine this assumption, we first study the factors influencing the probability of choosing a given level of job search intensity. Second, we address the question of the determinants of choosing a given job search strategy (formal, informal or a combination of both).

##### **4.5.4.1 Job Search Intensity**

In this part of our empirical analysis, we investigate the job search intensity, which we measure by the number of search methods used (Devine and Kiefer, 1991). This will be the dependent variable that we "job search intensity". Here we estimate the parameters of an ordered probit model. Table 4.10 reports the marginal effects of each independent variable having a significant impact on the job search effort <sup>7</sup>.

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7. Table B.13 in the appendix, reports the coefficient estimates.

TABLE 4.10 – The choice of search intensity (marginal effects)

Intensity	level 0	level 1	level 2	level 3	level 4	level 5
Age	-.002*** -3.22	-.030*** -3.45	-.013*** -3.44	-.004*** -3.38	.006*** 3.43	.043*** 3.45
Women	.001** 2.06	.008 1.58	.003 1.16	.000 0.14	-.002** -2.10	-.009 -1.25
Children	.002*** 2.79	.020** 2.57	.007** 2.19	.001 1.05	-.005*** -2.97	-.025** -2.28
With partner	.001*** 2.72	.017*** 2.86	.007*** 2.85	.002*** 2.81	-.004*** -2.84	-.024*** -2.86
Low education (Ref. No diploma)	-.003*** -5.40	-.041*** -6.42	-.016*** -6.10	-.004*** -4.58	.010*** 6.61	.054*** 6.20
Average education (Ref. No diploma)	-.006*** -7.58	-.095*** -12.28	-.044*** -10.22	-.019*** -7.01	.017*** 14.25	.146*** 10.49
High education (Ref. No diploma)	-.006*** -7.89	-.114*** -15.34	-.056*** -12.70	-.028*** -8.90	.016*** 13.80	.188*** 12.90
Registered as JS (yes)	-.003*** -6.39	-.048*** -8.92	-.020*** -8.84	-.007*** -7.96	.010*** 8.54	.068*** 8.99
Unemployment benefit (yes)	-.003*** -4.66	-.039*** -5.41	-.016*** -5.40	-.005*** -5.22	.008*** 5.30	.055*** 5.43
<b>Employed JS (Ref. Unemployed)</b>	-.010*** -8.05	-.128*** -17.50	-.044*** -19.72	-.006 -5.94	.033*** 14.59	.155*** 20.69
Average search (Ref. short)	-.000 -0.38	-.002 -0.38	-.001 -0.38	-.000 -0.38	.000 0.38	.004 0.38
Long search (Ref. short)	.001*** 3.58	.022*** 3.88	.009*** 3.88	.003*** 3.79	-.005*** -3.84	-.031*** "-3.90
Observations	11,274					

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes : Reported results are the marginal effects (z-values are reported below each) after estimating an ordered probit model. Additional control variables are : nationality, the region of residence (22), living in urban (if not rural) area, occupation status at the current job (for employed) at the previous job (for unemployed) the parents' occupation (7 options).

Source : Enquête Emploi 2010, author's calculations.

In line with initial expectations, the labor market status matters significantly in determining the job search intensity. Our findings support the evidence that the employed and unemployed job seekers use different job search intensities. The former are more likely to use multiple job search channels, while the latter search less with respect to our definition of job search intensity. This conclusion is confirmed after computing the marginal effects of the worker's labor market status. Thus we show that employed job seekers are 13% less likely to choose the lowest intensity level (level 1) as compared to the unemployed job seekers. However, the employed rather than unemployed job seekers are 15.5% more likely to use the highest level of search intensity (level 5).

Therefore, our initial analysis of the coefficient estimates, suggests that search intensity increases with age, in contrast with Bachmann and Baumgarten (2013) who focus on unemployed job seekers of working age (young and senior). This means that individuals of different age groups may have different perceptions regarding the expected benefits of job search activities. "Older" young individuals, tend to be more experienced and may have better knowledge of the different search methods' efficiency. Therefore, the examination of the age's marginal effect shows that the propensity to choose the highest level of job search intensity (level 5) increases by 4.3% for an additional year. This suggests that the number of search methods used also varies by age category, which is in line with the existing literature (Weber and Mahringer, 2008).

Equally, we find clear relationships between search intensity and other individual characteristics. Using the interaction term between gender and having children (if any) in all models allows the effect of having children to differ among women and men workers. Moreover, the analysis of the household structure (living with partner and having dependent children) allows us to examine job search intensity in more details. It appears that women with dependent children search less intensively than other workers, holding all other characteristics constant (see table B.13 in the appendix). Moreover, those who live with partner and/or having dependent children are less likely to use numerous job search channels and adopt less intensive search effort.

This means that the presence of children seems to be an additional restriction for female job seekers which may slow their search process. An alternative but complementary interpretation is that the presence of dependent children at the household, is not necessarily synonymous with decreased job search effort. Nevertheless, looking at the effect of dependent children regardless of gender, it seems that parenthood is associated with the targeting of particular search channels<sup>8</sup>.

Consistent with Weber and Mahringer (2008), we show that search intensity increases with the education level of the job seeker, which is in line with theoretical predictions. Several researches underline that intense job search strategy might increase the likelihood of exit out of unemployment, which may be an optimal search strategy in a stock-flow search framework (Petrongolo and Pissarides, 2001).

Our findings go along with this assumption, since we notice a highly significant and positive effect of the education level on the probability of choosing the intensity of job search. Indeed, higher rather than lower education, is associated with higher exploitation of job search channels. Thus, it is expected that job search should be less costly for the high-skilled job seekers. The latter are supposed to use more search strategies. Individuals who achieved high education levels are expected to receive more acceptable offers than those who are less or not educated. This constitutes an additional incentive for the former to strengthen their search effort.

Sabatier (2002) assumes that a significant opportunity cost is suffered by most gra-

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8. For presentational concerns, we do not display the marginal effects of the interaction term of gender and having children. However results are available from the author upon request. Concerning the effect of parenthood (where applicable) we find that female workers with dependent children are 24% more likely to use the highest level of search intensity (6% less than male workers with or without children as well as childless women). However motherhood rather than jobless male workers, is likely to increase by 5% the probability of using less than two job search channels. This suggests that job seekers who meet several family constraints have a slower job search process compared to single job seekers without children. This slows their search process and possibly results in the targeting of the job search channels used depending on how efficient or affordable they are perceived.

duates, who should exit out of unemployment faster. Most graduates have the feeling of having accomplished a long curriculum which gives them more choice in terms of job search methods and more incentive to intensify their research.

Concerning the effect of job search's length, we find that only the long-term search has a significant and negative effect on the search intensity chosen by the job seeker. Hence, long rather than short term job search duration (more than 11 months) is associated with less job search intensity. This implies that short-term job seekers are more likely to use the highest intensity level while the long-term one are likely to choose at most the level 3 intensity. This negative effect can be possibly a signal of discouragement because of their long searching. An additional possible interpretation could be probably the conversion of long-term job seekers (mainly the unemployed) to other more suitable devices (given their seniority in unemployment). Therefore, youngest workers, non-French and individuals living in urban areas (and in the Paris region), mobilize numerous methods of job search.

With regards to the two specific variables of job search, namely whether the job seeker is registred at the public job centre or receives unemployment benefits, our findings suggest that workers in these cases search more than those who are not concerned. Hence, in addition to the public service, the former use additional methods. Similarly, young workers who live in an area close to a labor pool or to an area of high economic activity (particularly in Paris urban areas), take advantage of the abundance of formal research methods. Hence, not only these channels are more accessible in these areas. Thus for job seekers living in an urban area (especially strong economic activity), job search seems less complicated and cheaper compared to those living in rural areas.

Overall, the effects revolve around two major results : First, the unemployed job seekers who target their job search's intensity by focusing on specific channels and selecting at most the third level of intensity (4 channels at most). Second, there are those who choose to expand their job search intensity multiplying and diversifying the job search channels used. The first category includes the youngest and unemployed job seekers who are not or less educated, women, living with partner and dependent children. In this category we are also

more likely to find job seekers who are French, have been searching for long-term and living in rural areas. However those who belong to the second category are more likely to be employed job seekers, the eldest youth having higher educational levels. In addition, we may find also childless and single job seekers and non French. Those who choose to deepen their search intensity are more likely to have been searching since a short duration, registered at the public services as job seekers and receive unemployment benefits.

#### 4.5.4.2 Job Search Strategy

In this part of the analysis, the focus is on the determinants of the job search channels' choice. In addition to the job search intensity chosen by the job seeker, another relevant choice has to be taken, this choice is no other than what job search channel(s) should be used. Hence, the choice of search methods might be not random and it depends on individual attributes but also on the labor market status, namely being employed or unemployed job seeker. As a consequence the *independence of irrelevant alternatives*, *IIA* might be violated as the combination of several methods is possible.

The job seeker has the choice either to use the formal (market methods and institutional intermediates) or the informal channels (social networks) or even to pool all or some of them. Results reported in table 4.11 (continued in 4.12 and 4.13) induce several conclusions<sup>9</sup>.

Our findings go along with the assumption that employed and unemployed job seekers do not have similar job search approaches. We provide evidence that employed rather than unemployed job seekers use both formal and informal channels for obtaining more information on job vacancies. Stronger effects are noticed for private and public intermediates as well as job adverts however differences are smaller concerning the informal channel (Such methods include referrals as well as direct contacts with the employers).

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9. For brevity, we only present the effects on the variables of interest, which identifies whether the job seeker is employed or unemployed, education, gender, nationality and occupation at the current (for employed) or last (for unemployed) job



TABLE 4.11 – Job Search Methods

	Direct	Social networks	Private agencies	Public	Job ads	any Other
Women	0,050	-0,104***	-0,283***	-0,003	0,115***	0,059**
	1.78	-3.78	-10.02	-0.10	3.40	2.07
Non French	0,045	0,075*	0,298***	0,087**	-0,019	-0,073
	1.06	1.78	7.06	2.02	-0.36	-1.64
Low educ (Ref.No dip)	0,154***	0,100***	0,171***	0,034	0,051	0,162***
	4.82	3.16	5.27	1.02	1.34	4.88
Average educ (Ref.No dip)	0,362***	0,119***	0,139***	0,132***	0,301***	0,393***
	7.55	2.60	2.94	2.76	5.07	8.49
High educ(Ref.No dip)	0,529***	0,167***	0,015	0,115**	0,466***	0,473***
	10.66	3.56	0.31	2.39	7.47	10.11
Registered as JS (yes)	0,017	0,027	0,174***	0,474***	0,259***	-0,061**
	0.60	0.99	6.17	16.31	7.22	-2.06
Unemp. benefit (yes)	0,078**	0,021	0,080**	0,278***	0,060	0,027
	2.07	0.56	2.16	6.82	1.21	0.70
<b>Employed search</b>	0,096***	0,088***	0,219***	0,842***	0,419***	-0,009
	2.95	2.77	6.59	25.88	10.93	-0.27
Urban	0,044	-0,010	0,175***	-0,009	0,109**	0,042
	1.17	-0.27	4.51	-0.23	2.48	1.08
Observations	11,274					
$\chi^2(228)$	4085.62					
Log-likelihood	-37758.88					

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Notes : Results are coefficient estimates of each variable on the probability of using a particular search channel (Z-values are reported below coefficients). The model estimated here is a CMP model similar to a multivariate probit model and for each equation the dependent variable is the search channel used : 1.direct application, 2.Social networks (of personal and professional contacts), 3.Private agencies, 4.Public agencies, 5.job ads and 6.other channels (including job exams). Additional control variables are the region of residence (22).

Source : Enquête Emploi 2010, author's calculations.

TABLE 4.12 – Job Search Methods (continued)

	Direct	Social networks	Private agencies	Public	Job ads	any Other
<b>Last/current occup :</b>						
Liberal (Ref.Craft)	0,238	-0,033	-0,715***	-0,090	-0,149	0,042
	1.61	-0.22	-4.64	-0.61	-0.85	0.29
Intermediate (Ref.Craft)	0,187	-0,122	-0,292**	0,129	-0,045	-0,039
	1.41	-0.90	-2.16	0.97	-0.28	-0.29
Non manual (Ref.Craft)	0,285	-0,192	-0,157	0,220*	0,031	-0,074
	2.19	-1.44	-1.19	1.70	0.20	-0.55
Manual (Ref.Craft)	0,113	-0,295**	0,263**	0,229*	0,032	-0,206
	0.87	-2.22	2.00	1.78	0.21	-1.54
Unemployed (Ref.Craft)	0,089	-0,265**	-0,195	-0,049	-0,077	-0,240*
	0.68	-1.97	-1.47	-0.38	-0.49	-1.77
Intercept	0,568	0,893***	-0,204	-0,879***	0,272	-0,234
	3.30	5.12	-1.16	-5.05	1.32	-1.31
Observations	11,274					
$\chi^2(228)$	4085.62					
Log-likelihood	-37758.88					

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Notes : Results are coefficient estimates of each variable on the probability of using a particular search channel (Z-values are reported below coefficients). The model estimated here is a CMP model similar to a multivariate probit model and for each equation the dependent variable is the search channel used : 1.direct application, 2.Social networks (of personal and professional contacts), 3.Private agencies, 4.Public agencies, 5.job ads and 6.other channels (including job exams). Additional control variables are the region of residence (22).

Source : Enquête Emploi 2010, author's calculations.

With regards to the education level, we show that the probability of using multiple channels increases regardless for all levels of diploma as compared to the less educated. However, the less stronger effects are noticed for the social networks and the public job centre. This suggests that differences among employed and unemployed regarding these specific channels are not that particular. Indeed, it is known that asking friends and relatives is more popular among those with low qualifications.

Similarly, the unemployed are also known to rely more than employed job seekers on employment intermediates such as the public or private job centres. However, being

highly-educated does not affect significantly the probability of searching through private employment agencies. Equally, low education does not seem to increase the probability of using the public job centre compared to the less educated.

Therefore, results highlight the significant role played by individual characteristics on the choice of job search channels. Hence, women are more likely to look for a job through direct procedures more significantly through sending/responding to job adverts, and doing anything else (any other) including job examinations. However, women rather than men are less likely to use private intermediates and social networks. This result is in line with several researches showing that women are less likely to rely on social networks rather than formal channels. It is then possible to conclude that the job search strategy used by women differ from that of men as women favor the use of direct methods and adopt a more direct search strategy. However, men seem more likely to rely on referral hiring and recruitment intermediaries.

We also notice that the probability of using social networks increases with the education level as compared with the less educated. Such job seekers have (the high educated) have a more developed social network, since the extent of the network increases with the level of human capital (Marry, 1992). Conversely, the effect of using the public recruitment services falls with the educational level. This is not very surprising since, the public job centres appear to be not enough suitable to the real needs of the high-educated. Hence it seems that the high educated are more prone to use social networks but also the direct procedures to employers.

Regarding the effect of the nationality, it appears that non French job seekers tend to diversify their job search channels. Hence, non French job seekers are more likely are more likely to use one social networks (as informal) and both private and public job centres (as formal). This means that job search strategy for these workers is to associate a typical informal and a typical informal method in order to increase their probability of finding a job. Individuals with such characteristics, can benefit from the network support formed by their families and friends during their search but mostly use networks of their parents.

However, family networks are richer and expanded when parents have jobs, compared to being unemployed or inactive (Degenne and Fosé, 1994).

TABLE 4.13 – Correlation between the equations' errors

Corr.coeff	Coef	z-value
$\rho$ dir-netw	0,276	17.14
$\rho$ dir-private	0,106	6.44
$\rho$ dir-ads	0,427	21.21
$\rho$ dir-pub	0,146	8.83
$\rho$ dir-oth	0,360	20.21
$\rho$ netw-priv	0,068	4.22
$\rho$ netw-ads	0,186	9.66
$\rho$ netw-pub	0,033**	2.04
$\rho$ netw-oth	0,084	5.14
$\rho$ priv-ads	0,276	12.97
$\rho$ priv-pub	0,185	10.97
$\rho$ priv-oth	0,062	3.67
$\rho$ ads-pub	0,310	15.17
$\rho$ ads-oth	0,123	5.88
$\rho$ pub-oth	0,135	7.82

Notes : \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$  (z-values are reported)

Source : Enquête Emploi 2010, author's calculations.

The examination of the two specific variables to job search, shows that job seekers who are registered at the public services as well as perceive unemployment benefits more likely to associate job centres (public and private) and direct contacts with employer (as informal). Indeed, our findings underline that such job seekers, have similar job search behaviour. Not only are they similar in terms of search intensity and preferences, also they have similar search practices.

With regards to the mother's occupation effect, it appears that when the mother is

active and occupies high managerial job position, then the probability of using social networks increases, while this probability decreases if the mother is relatively less qualified compared to when she is a manual worker (the professional occupation of parents are not reported for presentational purpose (the table becomes unreadable otherwise). Equally, if the father occupies a high-skilled occupation, then the probability of using the public employment office decreases.

Finally, table 4.13 shows that the correlation terms ( $\rho_{jk}$ ) between the different job search channels used by job seekers are significantly different from zero. Hence, we can observe high positive correlation between social networks and market methods and between private and public employment offices (formal channels). Our results also show that choices of job search channels are interdependent, thus confirming the importance of considering an unemployed's overall search channels. An additional conclusion that we can draw from the table 4.13, is that correlation coefficients of errors from the multivariate probit model are significantly different from zero. Hence, the IIA assumption is lifted which means that the choice of job search channels does not only depend on the particular attributes of these choices but also depends on the availability of other channels on the labor market (formal and informal).

## 4.6 Conclusion

We use data from the EEC survey (Insee-2010) to investigate the extent to which employed and unemployed job seekers have similar job search behaviour, i.e. search preferences, intensity and strategies. The job search literature suggests that competition with employed job seekers reduces the job opportunities for the unemployed and argues that both types of workers rival each other, for the same vacancies (Van den Berg and Ridder (1998), Burdett and Mortensen (1998), Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007)).

This chapter, examines the extent to which the employed and unemployed job seekers

are similar and rivaling for the same jobs. Our findings do not go along with the idea that the employed and unemployed job seekers are in direct rivalry for the same job vacancies. We find systematic differences between them in terms of individual characteristics, preferences towards working hours as well as job search intensity and strategies.

There is evidence that the unemployed apply to and accept different (worse) jobs than on-the-job seekers<sup>10</sup>. However there is a lack of empirical evidence when it comes to comparing employed and unemployed who are looking for a job. We notice significant differences in the characteristics of on- and off- the job seekers.

In the light of our initial empirical findings, we show that on-the-job seekers appear to have "worse" employments as compared to those who are employed but not searching for any new job. It is to mention that "worse" jobs are mainly "atypic and nonstandard" (temporary) and low paid employment.

Concerning the education level, there is evidence that the higher is the education level, the higher is the probability of being employed rather than unemployed job seeker. We also emphasize that, conditional on the level of education, employed and unemployed job seekers exhibit different preferences in terms of working hours.

Our results show that, on-the-job rather than unemployment search is associated with higher probability of preference for only full-time jobs. This result is consistent with the unemployed are less demanding compared to employed job seekers. It is plausible to conclude that, employed and unemployed job seekers have different job search characteristics not only in terms of preferences over working hours, but also with regards to their search behaviour.

We also observe differences in terms of job search intensity (as measured by the number of methods used) conditional on the labor market status. The employed and unemployed job seekers are likely to apply different job search intensities. Employed rather than unem-

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10. According to Kalleberg et al. (2000), nonstandard employment strongly increases workers' exposure to bad job characteristics net of controls for workers' personal characteristics, family status, occupation and industry.

employed job seekers, are likely to use a higher number of procedures, thus, are searching more intensively.

Therefore, these two types of job seekers display also differences regarding the type of job search channels used (whether formal, informal or combining them). We show that, compared to unemployed job seekers, the employed searching for a new job are more likely to combine several channels of job search. This means that this group of job seekers, is more likely to combine formal and informal channels.

Since these contrasting employment intermediates (formal and informal) differ importantly in efficiency and functioning mechanism, this evidence goes along with the unemployed displaying lower expectations regarding the job sought rather than employed job seekers.

Concerning the household characteristics, we show that the household structure plays an important role, in particular if the gender issue is highlighted. Searching becomes very costly for women as they are more concerned with the negative effect of having dependent children, which may lead her to spend more time searching for an acceptable offer which goes in hand with her constraints.

This evidence is in line with our findings regarding motherhood's effect on preferences over working hours. Our findings underline that, unlike fatherhood, motherhood or being a childless woman imply lower preferences for full-time jobs as compared to childless male workers.

This result implies two possible interpretations. The first is that female JS with dependent children might be less demanding in terms of job opportunities, thus are may be opened to the full- if not part-time option. The second interpretation is that this work arrangement could be advantageous for working mothers as it offers them more free time devoted to family responsibilities.

After computing the marginal effects of each explanatory variable of the intensity's choice, we find interesting results mainly concerning the effects of the household's structure. Hence, we notice that having dependent children in addition to being a woman or living

in couple decreases the probability of using multiple search channels. These individuals (having such characteristics) face particular constraints which limit their availability to search.

We suggest that family constraints highly affect the job search intensity and induce less search effort even though, we believe that these individuals should be more incited to find a job more quickly than others who have less constraints.

Therefore, we find a very significant and positive effect of the education level on the probability of choosing the intensity of job search. Thus, we suggest that the higher is the education level, the higher is the probability of using multiple search methods. Sabatier (2002) assumes that a significant opportunity cost is suffered by most graduates, who should exit out of unemployment faster. Most graduates have the feeling of having accomplished a long curriculum which gives them more choice in terms of job search methods and more incentive to intensify their research.

In conclusion, it appears that unemployed and employed job seekers are less likely to engage into search for the same job vacancies. We suggest that disparities in job search efficiency may not only be due to differences in terms of job preferences, but also to differences in terms of search strategies used to find a job (formal/informal methods, active/passive search). Therefore, job seekers might choose same search efforts, whilst choosing different job search strategies which would lead to different probabilities of receiving a job offer. For our future research we analyze the effect of search intensity and the search methods used on the unemployment duration, thus on the exit probability out of unemployment.



# Conclusion Générale



"Employabilité des jeunes en France : L'influence des réseaux et des canaux formels de recherche d'emploi"

Cette thèse aborde trois grands axes : La recherche, l'accès et la qualité de l'emploi des jeunes. L'objectif principal est de mettre en évidence l'influence des modes de recherche, et plus particulièrement des réseaux, sur l'employabilité des jeunes en France. Il s'agit de comparer la performance des réseaux (mode informel) à celle des canaux institutionnels (modes formels) sur le marché du travail. Afin d'examiner cela, les réseaux sociaux ont été divisés en deux types de réseaux : le réseau social ou professionnel et le réseau scolaire. Dans un contexte de renforcement du rôle joué par les établissements de formation et de la professionnalisation de l'éducation, , il semble opportun d'étudier plus en profondeur le réseau formé à l'école, afin de mettre en lumière son efficacité sur l'embauche.

Comme nous l'avons formulé dans le premier chapitre, cette thèse s'inscrit donc dans la continuité d'une littérature déjà existante portant sur les canaux formels et informels de recherche d'emploi. Elle vise notamment à mettre en évidence les différences entre ces deux mécanismes en prenant en considération non seulement les déterminants de leurs probabilités de fournir aux jeunes l'accès à l'emploi mais aussi leur influence sur la qualité du travail obtenu. Afin d'examiner cela, cette thèse utilise une approche empirique en se basant sur des données représentatives des jeunes travailleurs en France.

Dans le deuxième chapitre, nous avons abordé les différents problèmes rencontrés par les jeunes lors de l'étape de la recherche d'emploi. Nous nous sommes, par la suite, focalisé sur les difficultés engendrées par le genre, le lieu de résidence, la nationalité et le niveau de diplôme. Nos données, extraites de l'enquête Emploi de l'Insee (2010) montrent qu'en France il y a 65% d'actifs peu diplômés tandis que seulement 35% des jeunes actifs possèdent un diplôme de l'enseignement supérieur ( $\geq$  Bac+2). Les demandeurs d'emploi les plus diplômés sont confrontés à un phénomène que la littérature appelle "suroffre" de diplôme. Généralement, le diplôme en tant que signal de capacités extrinsèques et intrinsèques, garantit une certaine protection contre le chômage. Mais lorsque les travailleurs diplômés se retrouvent sur un marché du travail de plus en plus rétréci, leurs diplômes n'assurent

plus ce rôle correctement. Cependant, durant leur formation, ils ont pu se constituer un réseau. Nous suggérons que les réseaux peuvent jouer un rôle important qui permet à ses utilisateurs non seulement de se distinguer mais aussi de bénéficier d'un accompagnement différent de celui des intermédiaires de recrutement publics ou privés.

C'est ainsi que ce deuxième chapitre de la thèse contribue au débat sur l'accès des jeunes à l'emploi en considérant le rôle des canaux de recherche d'emploi comme intermédiaires de recrutement. Nous estimons un modèle Logit Multinomiale où la variable dépendante est le mode d'accès à l'emploi. Afin de tenir compte du biais de sélection en raison de la présence de jeunes chômeurs dans notre échantillon, nous adoptons une approche d'estimation à deux étapes similaire à celle de Van De Ven and Van Praag (1981). La première étape consiste à estimer la probabilité d'être en emploi plutôt qu'au chômage (équation de sélection). Par la suite, la deuxième étape consiste à estimer la probabilité d'obtenir un emploi à travers un mode d'accès bien déterminé.

A travers cette analyse nous avons pu mettre en évidence l'influence des caractéristiques individuelles ainsi que l'environnement socio-spatial des jeunes chercheurs d'emploi sur leur probabilité d'être employé.

Principalement, les résultats de ce premier travail empirique suggèrent que la distinction entre deux types de réseaux a permis de montrer que ce mode informel importe différemment en fonction des caractéristiques individuelles socio-démographiques ou socio-spatiales. C'est ainsi que la tendance chez les plus diplômés est de s'insérer en faisant appel au mode informel, soit à travers les réseaux scolaires ou bien en envoyant des candidatures spontanées. En ce qui concerne les peu ou non diplômés, le recours aux réseaux de contacts personnels ou professionnels ainsi qu'aux intermédiaires publics d'emploi est le plus utile afin d'obtenir un travail. Ces résultats vont de pair avec les constatations de Kramarz and Skans (2014) selon lesquelles les liens faibles aident les gens avec des qualifications plus élevées.

Une deuxième série de résultats concerne les caractéristiques socio-spatiales. Les personnes vivant dans une ZUS sont plus susceptibles de trouver un emploi par le biais des

réseaux scolaires, des organismes publics ou des concours. Il semblerait donc que lorsque les gens rencontrent des difficultés à trouver un emploi par le biais des canaux informels (candidatures directes, réseaux sociaux et scolaires), l'Etat peut jouer un rôle important.

Lorsque nous nous concentrons sur les caractéristiques géographiques du lieu de résidence, nous constatons un effet plus élevé des réseaux sociaux et scolaires dans les zones urbaines. A l'inverse, les autres canaux formels sont plus fréquemment utilisés dans les zones rurales pour trouver un emploi. Cet effet des réseaux scolaires est d'autant plus important pour les Franciliens ne vivant pas dans les zones ZUS. Cela peut également être expliqué par une forte concentration des établissements scolaires dans l'agglomération économique polycentrique de la région Ile de France (Paris).

Après avoir mis en évidence la pertinence des réseaux scolaires pour les plus jeunes et les plus diplômés ainsi que l'importance des intermédiaires publics pour les moins qualifiés, le troisième chapitre de la thèse, vise à fournir des indicateurs d'efficacité pour ces canaux. Ces indicateurs peuvent être objectifs et subjectifs. Les indicateurs objectifs définissent la qualité de l'emploi, il s'agit du salaire (monétaire), du type de contrat et de l'ancienneté dans l'entreprise (non-monétaires). Les indicateurs subjectifs sont liés à la satisfaction ou non de l'emploi actuel. Les raisons d'insatisfaction peuvent être liées aux attributs monétaires (insatisfaction à l'égard des salaires) ou non monétaire de l'emploi (insatisfaction à l'égard du rythme horaire, des conditions de travail, de la sécurité de l'emploi et l'inadéquation entre le travail et les qualifications du l'employé).

Dans cette analyse, un intérêt particulier concerne le rôle joué par les canaux de recherche d'emploi, en particulier, la distinction entre les canaux formels (à savoir les deux intermédiaires de l'emploi public et privé) et les canaux informels (réseaux sociaux et scolaires). La question que nous avons posée dans ce chapitre consiste à savoir quand les canaux formels et informels présentent un avantage en termes de qualité d'appariement pour jeune travailleur-emploi ?

Conformément à nos attentes initiales, la distinction entre ces deux types de réseaux a permis de prouver que les deux réseaux sociaux et scolaires affectent différemment les attri-

but de l'emploi mais aussi la satisfaction du travailleur. Tandis que les réseaux scolaires, comparés aux candidatures directes, semblent offrir des emplois temporaires (probablement comme passerelles vers des emplois permanents), les réseaux sociaux jouent un rôle positif sur la sécurité de l'emploi en générant des emplois plus durables. Malgré cet effet positif des réseaux sociaux sur la sécurité de l'emploi et sur l'ancienneté, des effets négatifs sont observés sur le salaire mais aussi sur la satisfaction vis à vis d'autres facettes non monétaires des emplois obtenus grâce à ce mode.

Ce troisième chapitre a montré donc qu'au delà du diplôme, l'expérience professionnelle ou les caractéristiques de l'emploi, les modes de d'accès affectent aussi la qualité et la satisfaction de l'emploi. Ceci implique la nécessité d'inciter les jeunes travailleurs à rendre leur stratégie de recherche plus efficace. Dans ce sens, le renforcement du rôle joué par les réseaux scolaires en permettant une transition de l'école à l'emploi plus fluide est nécessaire. Cela servirait non seulement à renforcer l'employabilité des jeunes, à améliorer leur qualité d'appariement sur le marché et à augmenter leur bien-être au travail. L'impact des intermédiaires formels de recrutement n'étant pas encore clair sur des appariements qui endurent, ce travail de recherche souligne que davantage d'efforts restent à faire en termes de politiques publiques afin de rendre ces dispositifs formels plus efficaces et plus réactifs aux besoins des demandeurs d'emploi et aux exigences du marché.

Cela peut être possible en réformant le fonctionnement des intermédiaires publics de recrutement. Ce mode institutionnel apparaît uniquement utile pour les non qualifiés et même s'il permet des emplois plus durables, il génère aussi les emplois les moins payés. Ainsi, il est nécessaire de rendre ce dispositif plus influent en adaptant ses services aux besoins du marché du travail qui changent constamment. Des actions qui vont dans ce sens sont susceptibles d'attirer de nouveaux partenariats avec des entreprises à fort potentiel de croissance et de recrutement ce qui est nécessaires afin de rendre ce mode plus attrayant aussi pour les plus diplômés.

Nous nous sommes uniquement intéressés jusqu'ici qu'aux individus en emploi. Le dernier chapitre de ce travail de thèse est consacré à la comparaison entre le comportement

des chômeurs et celui des employés lors d'une recherche d'emploi. Nous essayons, à travers cette étude, de fournir de nouvelles preuves intéressantes quant aux différences de stratégies et de préférences de ces deux types de demandeurs d'emploi.

Pour cela, on étudie dans quelle mesure ces deux types de demandeurs d'emploi ont des comportements de recherche similaires en termes de : préférences, intensité et stratégies de recherche d'emploi. Autrement dit, nous cherchons à savoir si ces deux types de demandeurs d'emploi sont réellement en concurrence pour les mêmes offres de travail. À ce sujet, la littérature suggère que la présence sur le marché du travail des demandeurs pourvus d'emploi, réduit la probabilité d'accès pour les chômeurs. Certains auteurs prouvent que les deux types de demandeurs d'emploi apparaissent en concurrence pour les mêmes offres d'emploi (Van den Berg and Ridder (1998), Burdett and Mortensen (1998), Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007)). Cependant, il y a un manque de preuves empiriques lorsqu'il s'agit de comparer les travailleurs en emploi et les chômeurs qui sont à la recherche d'un travail. Nos résultats montrent des différences significatives dans les caractéristiques de ces deux types de demandeurs d'emploi.

Nos résultats réfutent l'idée selon laquelle ces deux types de demandeurs d'emploi sont en concurrence directe pour les mêmes offres d'emploi. Nous trouvons des différences systématiques entre eux en termes de caractéristiques individuelles ou de préférences à l'égard du type de travail recherché, d'intensité et stratégies de recherche d'emploi. Ainsi, les demandeurs d'emploi au chômage ont plus tendance à postuler à des emplois précaires comparés aux demandeurs d'emploi en possédant déjà un<sup>11</sup>. Nos résultats empiriques soulignent le fait que les employés qui sont à la recherche d'emploi le sont car ils sont pourvus d'emploi précaires ou moins satisfaisants.

En ce qui concerne le niveau de l'éducation, nous avons montré que moins le niveau d'éducation de l'employé est élevé, plus la probabilité d'être à la recherche d'un autre

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11. Selon Kalleberg et al. (2000), l'emploi atypique augmente fortement de l'exposition à de mauvaises caractéristiques de l'emploi net des contrôles pour les travailleurs (caractéristiques personnelles, situation familiale, profession et type d'industrie).

emploi l'est aussi. Nos résultats montrent que, chercher en emploi plutôt qu'au chômage est associé à une probabilité plus élevée de préférence pour des emplois à temps plein. Ce résultat est cohérent avec le fait que les chômeurs sont moins exigeants par rapport aux demandeurs en emploi. Il est possible de conclure que les chômeurs et les employés demandeurs d'emploi ont des comportements différents de recherche d'emploi non seulement en termes de préférences pour le type de travail recherché (temps partiel/temps plein), mais aussi en termes d'intensité et de méthodes de recherche.

En effet, nous observons des différences en termes d'intensité de recherche d'emploi (tel que mesurée par le nombre de méthodes de recherche utilisées) selon le statut du demandeur sur le marché du travail. Les demandeurs pourvus d'emploi sont plus susceptibles d'utiliser un plus grand nombre de procédures comparés aux chômeurs. Ainsi, ils adoptent une stratégie de recherche d'emploi plus intensive.

Par conséquent, ces deux types de demandeurs d'emploi affichent également des différences en ce qui concerne le type de canaux de recherche d'emploi utilisés (formel, informel ou combiner les deux). Nous montrons que, par rapport aux chômeurs, les travailleurs en emploi tendent à combiner plusieurs canaux de recherche d'emploi formels et informels en même temps. Cela signifie que ce groupe de demandeurs d'emploi diversifie alors que les chômeurs ciblent les modes de recherche utilisés.

En ce qui concerne les caractéristiques des ménages, nous montrons que la structure du ménage joue un rôle important, en particulier si la question du genre est mise en évidence. La recherche d'emploi devient plus coûteuse pour les femmes car elles sont plus concernées par l'effet négatif d'avoir des enfants à charge, ce qui peut les amener à passer plus de temps à la recherche d'une offre acceptable qui va de pair avec leurs contraintes. Ce résultat est conforme à nos constatations concernant l'effet de la maternité sur les préférences pour les heures de travail. Nos résultats montrent que, pour une femme, le fait d'avoir des enfants engendre une préférence plus faible pour les emplois à temps plein.

Ce résultat implique deux interprétations possibles. La première est que les femmes avec enfants à charge à la recherche d'emploi, peuvent être moins exigeantes en termes de



possibilités d'emploi (temps partiel sinon temps plein). La deuxième interprétation est que ce type d'arrangement du temps de travail pourrait être avantageux pour les mères qui travaillent car il leur offre plus de temps libre consacré à leurs responsabilités familiales.

Par ailleurs, les effets marginaux de chaque variable explicative sur le choix de l'intensité montrent des résultats intéressants concernant principalement les effets de la structure du ménage. Nous suggérons que les contraintes familiales sont très influentes sur l'intensité de la recherche d'emploi et induisent moins d'effort de recherche, même si l'intuition est qu'elles pourraient aussi être une incitation à trouver un emploi plus rapidement afin de subvenir à des besoins nombreux.

À la lumière de nos résultats empiriques, nous suggérons aussi que plus le niveau d'éducation est élevé, plus la probabilité d'utiliser plusieurs méthodes de recherche l'est aussi. La plupart des diplômés ont le sentiment d'avoir accompli un long cursus en investissant dans leur éducation. Ce qui leur donne plus de choix en termes de méthodes de recherche d'emploi et plus d'incitation à intensifier leurs recherches.

En conclusion, nous suggérons que l'existence de disparités dans la recherche d'emploi entre ces deux types de demandeurs, peut être due, non seulement, à leurs différences de préférences pour le type d'emploi recherché, mais aussi à leurs différences de stratégie de recherche. Par conséquent, les demandeurs d'emploi peuvent choisir les mêmes efforts de recherche, tout en choisissant différentes stratégies de recherche d'emploi qui conduirait à différentes probabilités de recevoir une offre d'emploi. Pour nos recherches futures, nous analyserons l'effet de l'intensité de la recherche et des méthodes de recherche utilisées sur la durée du chômage, donc sur la probabilité de sortie du chômage.

Ainsi comme prolongements à ce travail, l'étape suivante devrait faire l'objet d'une étude en données de panel afin de nous permettre de suivre les jeunes sur plus d'une période. En effet, une telle approche nous permettra non seulement de mieux identifier l'effet de la conjoncture sur l'accès à l'emploi chez les jeunes, mais aussi d'utiliser des outils tels qu'un modèle de durée afin de fournir une mesure d'efficacité à ces différentes stratégies de recherche d'emploi (étape post-search). Il serait également possible de comparer les

probabilités d'accès à l'emploi chez ces deux types de demandeurs d'emploi et analyser la qualité des appariements générés.

De nombreuses extensions de cette thèse sont possible. Par exemple, au delà des réseaux personnels, professionnels et scolaires, il existe aussi des réseaux sociaux virtuels sur Internet comme LinkedIn, Monster, Viadeo, etc. Cette étude permettrait de voir si les disparités en termes de niveau d'éducation, de genre, d'origine ou de lieu de résidence prouvées dans cette thèse sont valables aussi pour les réseaux sociaux virtuels.

Il serait également intéressant d'analyser plus en profondeur le rôle des réseaux scolaires à travers une base de données plus spécifique qui contient des informations sur les réseaux d'anciens formés à l'université ou dans les Grandes Ecoles afin de comparer leurs fonctionnements ainsi que leurs efficacités respectives.

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# Appendices



# A Appendix Introduction

## A.1 The Employability Concept

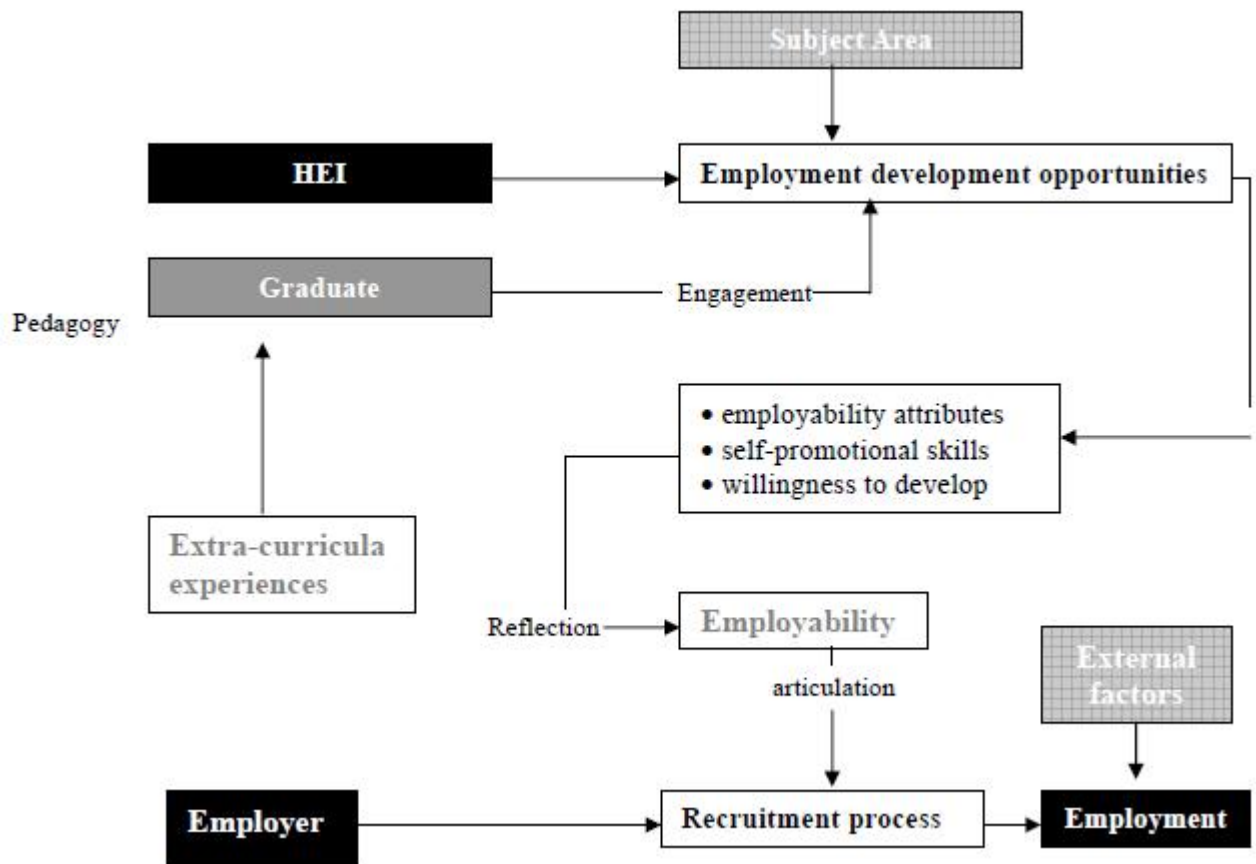


FIGURE A.1 – A schematic model of employability, Yorke (2001).

Source : Lees (2002).

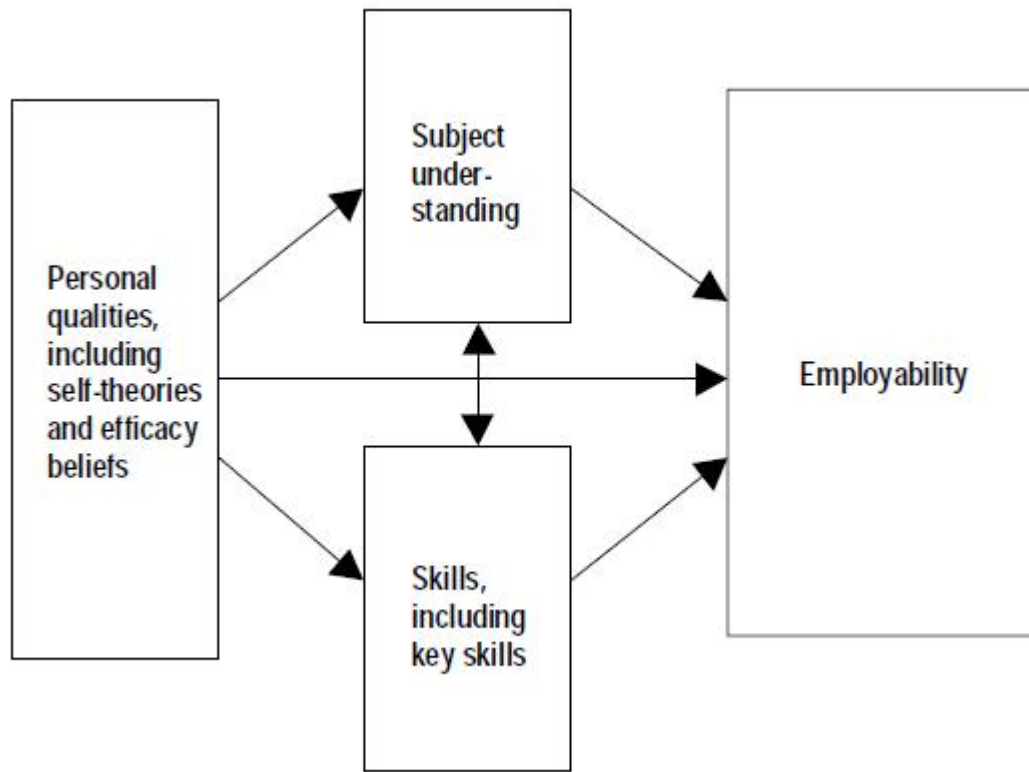


FIGURE A.2 – A model of graduate employability development Harvey (2001).

Source : Lees (2002).

## B Appendix Chapter

### B.1 Determinants of the job access channel

TABLE B.1 – Job access channels to the current firm

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- Missed (Non-salaried) or not mentioned
  - 1 - Through personal procedure on behalf of the employer or through direct application
  - 2 - Through family relationships or personal/professional contacts
  - 3 - Through job adverts
  - 4 - Through "Pôle Emploi (ex ANPE)" or any other public agency (APC, "Mission locale" ..)
  - 5 - Through private employment agency
  - 6 - Through school or a training centre
  - 7 - Through job examinations
  - 8 - Through a contact at the firm
  - 9 - Through previous employer or the spouse's one (professional transfer, redeployment in the same firm)
  - 10 - Through any other method
- 
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Source : *Enquête Emploi (Insee 2010), List of variables.*

FIGURE B.1 – Distribution of Population in SUZ and Regional Capitals Weight in 2006

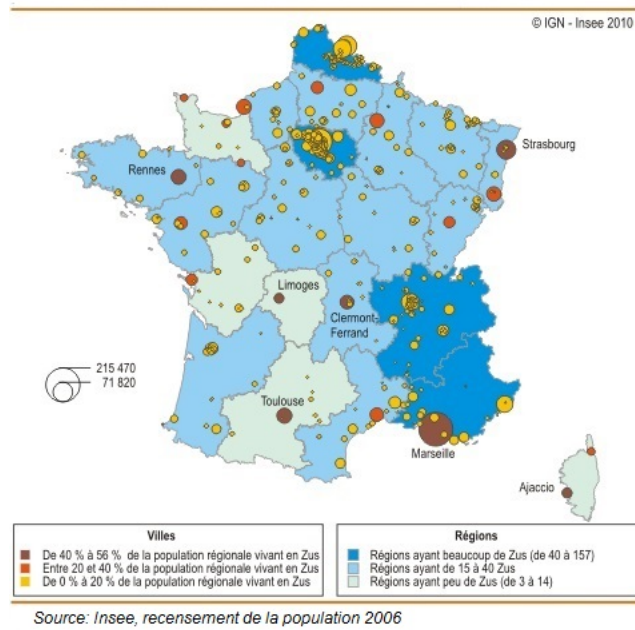


TABLE B.2 – Type of residence area and SU zone density

Region categories according to their frequency of SUZ	Not SUZ	SUZ
Paris region	89.59	10.41
Average group	92.19	7.81
low group	94.34	5.66
<b>Total</b>	<b>92.87</b>	<b>7.13</b>

<sup>1</sup> Source : Labor survey, Insee (2010), authors calculation. Weighted statistics.

SUZ means Sensitive Urban Zone.

FIGURE B.2 – Share of urban population by region

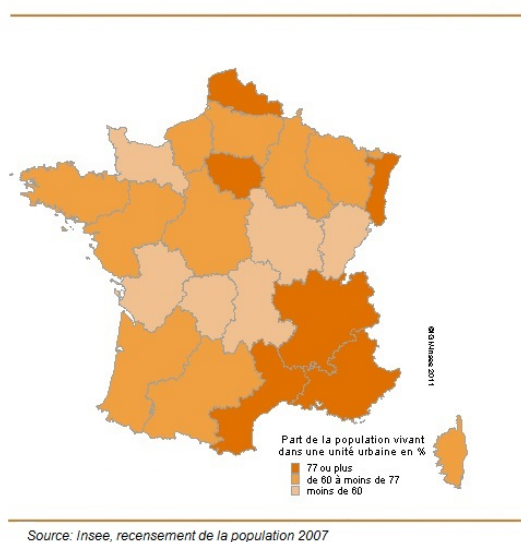


TABLE B.3 – Type of residence area and urban population density

Region categories according to their rurality level	Urban area	Rural area
Low group	91.13	8.87
Average group	73.28	26.72
High group	62.81	37.19
<b>Total</b>	<b>81.20</b>	<b>18.80</b>

<sup>1</sup> Source : Labor survey, Insee (2010), authors calculation. Weighted statistics.

TABLE B.4 – The determinants of job finding channels : coefficient estimates

Variables	Direct applications			Social network			School network			Public agencies			Private agencies		
	coef	z		coef	z		coef	z		coef	z		coef	z	
Age	-0,092	***	-130,8	-0,07	***	-93,04	-0,19	***	-192,5	-0,032	***	-32,48	-0,008	***	-5,26
Women	0,145	***	40,93	-0,283	***	-73,81	-0,1	***	-19,56	0,298	***	56,77	-0,606	***	-75,1
In couple	0,092	***	18,51	0,044	***	8,19	-0,11	***	-16,41	0,144	***	19,52	0,089	***	8,31
<b>Nationality</b>	<i>ref : French &amp; 2 parents are French</i>														
FR&IP FR	0,18	***	22,83	0,298	***	35,62	0,397	***	38,21	0,299	***	27,82	0,341	***	21,05
FR&2P NFR	0,083	***	9,76	0,03	***	3,26	0,03	**	2,45	-0,05	***	-4,09	0,17	***	9,04
NonFrench	0,456	***	50,57	0,935	***	100,7	0,697	***	58,8	0,438	***	35,09	0,895	***	54,86
<b>Education level</b>	<i>ref : No diploma</i>														
Low	-0,349	***	-56,66	-0,544	***	-83,91	0,076	***	8,46	-0,572	***	-66,61	-0,28	***	-20,93
Average	0,081	***	10,51	-0,359	***	-44,08	0,892	***	81,93	-0,062	***	-5,94	-0,016	ns	-0,95
High	-0,945	***	-136,5	-1,428	***	-192,5	0,086	***	8,45	-1,246	***	-122,6	-0,281	***	-19,17
<b>Mother's occ.</b>	<i>ref : Manual worker</i>														
Kraft	0,113	***	11,03	0,21	***	19,47	-0,38	***	-25,96	-0,083	***	-5,26	0,139	***	6,88
Skilled	-0,104	***	-13,68	-0,003	ns	-0,41	-0,01	0,2	-1,35	-0,074	***	-6,51	-0,872	***	-51,63
semi-skilled	0,052	***	5,81	0,044	***	4,51	-0,54	***	-41,64	0,163	***	12,59	-0,046	**	-2,52
unskilled	0,047	***	7,04	0,066	***	9,41	-0,37	***	-41,8	0,124	***	13,43	-0,23	***	-16,85
inactive	-0,142	***	-19,81	-0,11	***	-14,44	-0,42	***	-43,09	-0,102	***	-10,14	-0,339	***	-22,9
<b>Father's occ.</b>	<i>ref : Manual worker</i>														
Kraft	0,116	***	19,8	0,465	***	75,81	0,21	***	25,41	-0,198	***	-22	0,205	***	15,75
Skilled	0,216	***	41,05	0,09	***	15,4	0,207	***	27,75	-0,021	**	-2,59	0,599	***	52,71
semi-skilled	0,142	***	26,26	0,214	***	36,69	-0,09	***	-11,45	-0,132	***	-16,06	0,293	***	24,12
unskilled	0,073	***	13,43	-0,084	***	-14,1	0,163	***	21	-0,012	ns	-1,56	0,172	***	13,63
inactive	-0,389	***	-33,1	-0,501	***	-38,9	-0,49	***	-27,38	-0,058	***	-3,78	-0,332	***	-10,91

Continued next ...



TABLE B.5 – The determinants of job finding channels : coefficient estimates (continued)

Variables	Direct applications	Social network	School network	Public agencies	Private agencies
<b>Region/RUR</b>	<i>ref : Urban area in low rural region</i>				
Rur/low	0,206 ***	22,89 0,029 ***	2,96 0,013 ns	0,98 0,362 ***	28,93 -0,022 ns
Urban/Averag	-0,154 ***	-19,58 -0,333 ***	-39,66 -0,42 ***	-40 0,044 ***	4 1,116 ***
Rur/inAverag	-0,111 ***	-12,03 -0,258 ***	-26,32 -0,56 ***	-43,26 -0,299 ***	-22,54 0,539 ***
Urban/inHigh	-0,139 ***	-14,67 -0,326 ***	-32,19 -0,5 ***	-38,22 0,063 ***	4,85 1,156 ***
Rur/inHigh	0,092 ***	8,07 -0,132 ***	-10,82 0,085 ***	5,59 0,2 ***	12,72 1,334 ***
<b>Region / SUZ</b>	<i>ref : Not SU Zone in Paris region</i>				
SUZ/in Paris	-0,111 ***	-8,76 -0,144 ***	-10,56 0,409 ***	24,62 0,16 ***	8,52 -0,15 ***
NoSUZ/inAverage	0,178 ***	34,54 0,24 ***	43,11 0,152 ***	20,74 0,49 ***	59,1 0,037 **
SUZ/inAverage	-0,145 ***	-10,11 -0,129 ***	-8,34 -0,68 ***	-27,88 0,315 ***	15,88 0,705 ***
NoSUZ/infew	0,377 ***	46,27 0,391 ***	44,95 0,455 ***	41,92 0,629 ***	52,54 -0,897 ***
SUZ/infew	0,386 ***	24,83 0,307 ***	18,44 0,65 ***	30,9 0,864 ***	42,07 -0,752 ***
<b>gen_residual</b>	0,768 ***	22,69 0,701 ***	19,55 0,711 ***	15,41 1,63 ***	35,67 -0,022 ns
Intercept	3,78 ***	143,9 3,006 ***	107,5 4,263 ***	118,4 -0,264 ***	-7,18 -1,088 ***
N		33384			
Loglikelihood		-43659,217			
$\chi^2(160)$		3231,7			

\* Significant at the 10%, \*\* Significant at the 5%, \*\*\* Significant at the 1% level.

Note : The model estimated is a multinomial logit model. Reported estimations are the coefficient of each variable in the probability of finding a job through a particular job search channel. Weighted estimates.

Note : SUZ means Sensitive Urban Zone. For example, if we look at the effect of the interaction term between the subgroups of regions and the dummy Sensitive Urban Zone, we can read that people living in an urban but not sensitive zone (NoSUZ) in the subgroup of regions characterized by a high number of SU-Zones, are less likely to find a job through direct applications.

## B.2 Job matching quality

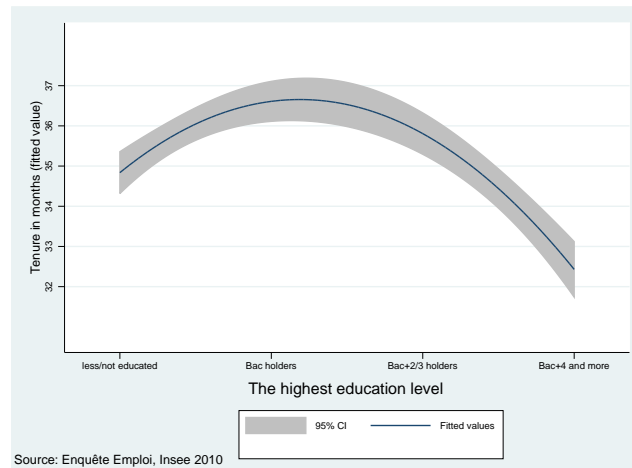


FIGURE B.3 – quadratic distribution of tenure (in months) and the education level

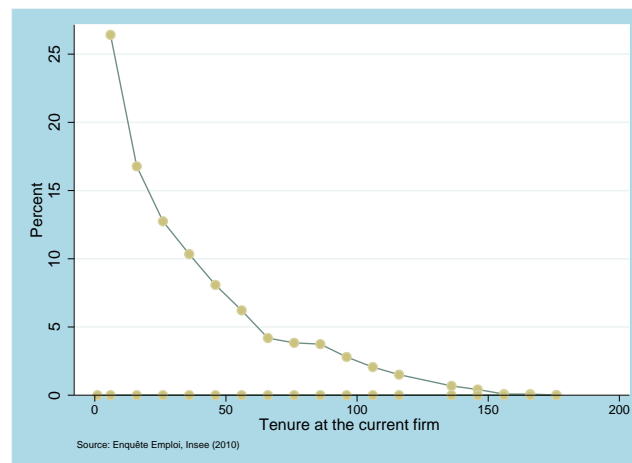


FIGURE B.4 – Distribution of tenure at the current job (in months)

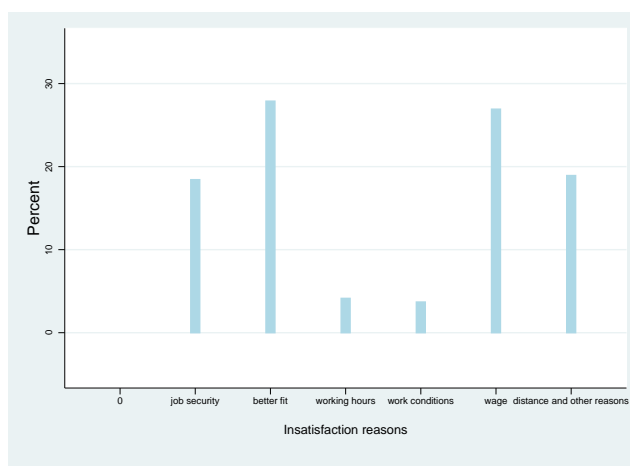


FIGURE B.5 – Reasons of dissatisfaction with the current job

TABLE B.6 – Descriptive statistics

Access channel	Gender		Education level				Anterior situation		
	Men	Women	< Bac	Bac	Bac+3/4	Bac+5	Student	Unemployed	Employed
Direct app	50.18	56.38	51.33	54.35	59.18	49.62	51.48	53.64	54.69
Social net	25.61	17.89	29.15	22.22	16.7	14.42	17.99	21.82	26.67
School net	6.83	6.67	4.72	6.41	8.34	9.15	13.3	2.06	1.67
Agencies	7.78	8.55	8.98	7.34	8.19	7.73	4.06	17.43	7.91
Others	9.60	10.52	5.83	9.69	7.58	19.08	13.18	5.06	9.05

Source : Enquête Emploi, Insee, 2010. Authors calculations.

Note : Observations are weighted.

## *Empirical Results for the Employment Probability Selection Equation*

As discussed earlier in this chapter estimating the effect of the access channel and the other explanatory variables on the reasons of dissatisfaction with the current job, the willingness to find a new one, the job tenure, the contract type and the monthly wage supposes that the individual has an employment. Thus, estimating the model only considering the sample of the employed would lead to biased estimates as having a job depends on unobservable characteristics related to ability, effort, etc.

In order to handle with this selection problem of our sample, we estimate the probability of being employed which is used as the selection equation in the two-steps procedure when we estimate each of the two system of equations. Econometric results reported in table B.7 are both the coefficients and the marginal effects of each variable on the probability of being employed. The predicted values of this equation will be included at the second step in each equation of our two systems.

The exclusion restriction is respected here as we control for the fact of having children and the housing type as these two variables do not have a direct impact on the structural models (of our system of equation : dissatisfaction, job access channel, contract and tenure at the job) and are strongly correlated with the probability of being employed but not with any explained variable of our two systems of equations.

Two sets of variables are estimated in the probit estimation (Table B.7). A first observation is that the eldest young workers are more likely to find a job compared to the youngest and this probability increases by 0.8% for each additional year. A possible explanation is that, while workers become more experienced their likelihood to be employed increases. The probability of being employed is lower for women compared to men. This finding joins European reports (OECD, 2012) underlining that the employment rate for men is higher compared to women<sup>1</sup> (OECD, 2012).

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1. Closing the Gender Gap : Act Now, OECD publication, December 2012

TABLE B.7 – Individual employment probability

Variables	Coefficient	z-value	Margin effects
Age	0.038***	188.66	0.008
Women	-0.112***	-86.87	-0.023
Living In couple	0.413***	263.73	0.084
<b>Nationality according to parents origin</b>			
One parent is not French	-0.233***	-102.09	-0.051
None of them is French but their child is	-0.325***	-136.13	-0.075
Neither the parents nor the child are French	-0.278***	-116.60	-0.062
Children	-0.145***	-76.46	-0.031
<b>Education level</b>			
<b>REF :less/no diploma</b>			
BAC	0.307***	192.67	0.068
Middle	0.440***	202.77	0.091
High	0.402***	185.95	0.085
<b>Mother status</b>			
<b>REF : manual</b>			
skilled	0.092***	31.13	0.018
semi-skilled	0.012***	3.46	0.002
craft	0.097***	25.57	0.019
unskilled	0.020***	9.03	0.004
inactive	-0.140***	-59.94	-0.031
unknown	-0.009**	-1.85	-0.002
<b>Father status</b>			
<b>REF : manual</b>			
skilled	0.045***	20.13	0.009
semi-skilled	0.070***	32.11	0.014
craft	0.127***	58.48	0.025
unskilled	-0.037***	-17.85	-0.008
inactive	-0.283***	-82.19	-0.068
unknown	-0.123***	-49.23	-0.027

\*Significant at 10%, \*\* at 5%, \*\*\* at 1%.

Note : reported estimates are the coefficient, T-stat and the marginal effect of each variable : weighted estimates. Marginal effects for the interaction terms result from our own calculations, as the difference between the corresponding average probability and the average probability for the category of reference.

Source : Enquête Emploi, Insee (2010), author's calculations.

Gender disparities at the recruitment and the wage levels (Gobillon et al., 2015) in addition to strong incentive policies to keep mothers at home (subsidies for child care) lower the probability for women to work. Not surprisingly we find this effect in this estimation, since the fact of having children decreases this likelihood by 3.1% compared to job seekers who do not have children<sup>2</sup>.

Concerning the influence of origins on the probability of finding a job, we find that having foreign origins (at least one parent is not French), diminishes the likelihood of finding a job. More precisely, we distinguish 4 different groups of individuals according to their origins (Meurs et al., 2006) (having two French parents, one parent is not French, none of them is French but the child is, neither the parents nor the child are French).

Our results are in line with a DARES (2008) study conducted in six big French cities using the testing approach. The DARES report shows that when employers have expressed their recruitment choice, they favored nearly four out of five candidates evoking a hexagonal origin, even though the candidate evoking a North African or black African origin had strictly the same skills.

Looking at the effect of education, we notice that the highest diploma have a significant positive effect on the probability of finding a job compared to the less educated, specially if this diploma is higher than the Baccalaureate degree. This is in line with recent studies which highlight the positive returns to education and the high correlation between education and labor market participation (also from a gender point of view). Having a diploma helps to get better wages and to avoid unemployment spells OECD (2014).

The influence of the parents occupation is also estimated and shows that having skilled parents help to find a job. A possible explanation would be the differences in human and social capital. We suggest the existence of a social network effect or the capacity for these

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2. We also looked at the children effect by gender and noticed that while the effect of having children increases slightly the probability of working for men (+0.8%), it decreases strongly this probability for women (-7.9%) (results are available upon request).

TABLE B.8 – Individual employment probability

Variables	Coefficient	z-value	Margin effects
<b>Housing type</b>			
<b>REF : private renter</b>			
Social	-0.180***	-100.56	-0.042
Owner	0.150***	99.73	0.029
Free of charge	0.225***	52.02	0.042
<b>Living in a rural area</b>	0.159***	47.84	0.024
<b>Region#rur</b>			
<b>REF : Not rural in regions with seldom rural areas</b>			
Rural in regions with seldom rural areas			0.033
Not rural in regions with average rural areas	0.134***	52.19	0.028
Rural in regions with average rural areas	0.061***	14.65	0.045
Not rural in regions with a lot of rural areas	0.181***	56.66	0.037
Rural in regions with a lot of rural areas	0.106***	22.04	0.053
<b>Living in a SUA area</b>	-0.200***	-48.01	-0.051
<b>Region#SUA</b>			
<b>REF : Not SUA in Paris region</b>			
SUA in Paris region			-0.038
Not SUA in regions with a lot of SUA	-0.129***	-61.67	-0.023
SUA in regions with a lot of SUA	-0.103***	-19.06	-0.061
Not SUA in regions with quite SUA	-0.244***	-87.76	-0.048
SUA in regions with quite SUA	-0.298***	-57.52	-0.110
Intercept	-0.036***	-6.58	

\*Significant at 10%, \*\* at 5%, \*\*\* at 1%.

Note : reported estimates are the coefficient, T-stat and the marginal effect of each variable : weighted estimates. Marginal effects for the interaction terms result from our own calculations, as the difference between the corresponding average probability and the average probability for the category of reference.

Source : Enquête Emploi, Insee (2010), author's calculations.

parents to create jobs if they are (for both) craft-persons.

In the estimation of this model we control also for the influence of both the neighborhood of the place of residence and the characteristics of the residence region. Results are not shown in the estimation output however the effects of these two indicators are detailed in Fakhfakh et al. (2015). The place of residence might reflect some relevant realities on the challenges faced by young job seekers if they live in a rural area or in a sensitive urban area. We show in Fakhfakh et al. (2015) that the best situation is for those living in a rural area where young people have a higher probability (+2.4%) to work. When looking at the cross-effects between the type of area of residence (sensitive or not sensitive urban area) and the region of residence's level of SUA, we note negative effects for all the situations, compared to those who live in the Paris region but not in a SUA neighborhood (for Paris and its suburbs).

In addition to these socio-demographic variables, we control for some variables describing the household characteristics such as the housing type. Workers who are hosted by their parents or are owners are more likely to find a job compared to those who use the private rental. On the contrary, living in social housing reduces the probability of being employed by 4.2%. Again, we suspect here that living in social housing is a signal of unobserved other factors which participate to reduce the probability of finding a job (income and some times guetto effect)<sup>3</sup>.

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3. In France living a social housing depends on earnings



TABLE B.9 – The determinants of the job access channel (continued)

Variables	Social net	School net	agencies	others
<b>Mother's occupation</b>				
Craft (ref. manual)	0.087	-0.201**	-0.167**	-0.017
	1.40	-2.32	-2.06	-0.21
Skilled (ref. manual)	0.105**	0.139**	-0.073	0.059
	2.10	2.24	-1.19	0.96
Semi-skilled (ref. manual)	0.009	-0.212***	0.062	-0.003
	0.16	-2.79	0.90	-0.05
Non-manual (ref. manual)	0.027	-0.176***	-0.035	-0.022
	0.68	-3.37	-0.73	-0.44
Unemployed (ref. manual)	0.026	-0.014	0.031	0.073
	0.61	-0.24	0.60	1.33
<b>Father's occupation</b>				
Craft (ref. manual)	0.315***	0.014	-0.090*	-0.023
	8.81	0.29	-1.92	-0.48
Skilled (ref. manual)	-0.049	0.060	-0.069	-0.117***
	-1.28	1.30	-1.52	-2.64
Semi-skilled (ref. manual)	0.039	-0.093*	-0.182***	-0.070
	1.08	-1.93	-4.00	-1.59
Non-manual (ref. manual)	-0.056	0.045	-0.047	-0.030
	-1.53	0.96	-1.08	-0.68
Unemployed (ref. manual)	-0.127	0.065	0.182**	0.241***
	-1.64	0.66	2.14	2.70
Observations		33436		
Log likelihood		-40617.24		
Wald $\chi^2(160)$		4047.83		

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%.

Note : Reported estimates are coefficients of each variable's effect on the probability of finding a job through a given access channel. We also control for the occupation type (10 options), place of residence characteristics (dummies for region and rurality/poverty rate).

Source Enquête Emploi Insee 2010. Author's calculations (Unweighted estimates).

TABLE B.10 – Reasons for dissatisfaction with the current job (continued)

Ref. Job security	career prospects	Work.hours	Work.condit	Salary	Distance
Installation/repair (ref. production)	-0.203*	-0.075	-0.245	-0.297**	-0.164
	-1.74	-0.32	-1.16	-2.03	-1.01
Security/cleaning (ref. production)	0.540***	-0.185	0.094	0.530***	0.195
	4.20	-0.60	0.42	3.43	1.08
Warehouses/logist. (ref. production)	0.047	0.077	0.013	0.018	0.021
	0.39	0.32	0.06	0.12	0.12
Hospitality/secret. (ref. production)	0.069	-0.040	-0.198	0.112	0.191
	0.64	-0.18	-0.94	0.78	1.25
Managing/account.(ref. production)	-0.195	-0.022	-0.375*	0.009	0.124
	-1.59	-0.10	-1.66	0.06	0.78
Sales (ref. production)	0.132	0.318**	-0.390**	0.116	-0.065
	1.51	1.98	-2.30	1.06	-0.53
Research&develop (ref. production)	-0.015	-0.041	-0.361	0.005	0.046
	-0.13	-0.16	-1.44	0.03	0.29
Teaching/health (ref. production)	-0.001	0.406**	0.103	0.429***	0.306**
	-0.01	2.20	0.58	3.50	2.29
Other (ref. production)	0.266***	0.427**	-0.160	0.353***	0.345***
	3.03	2.57	-0.96	3.17	2.85
Team management (ref. no)	-0.120	0.162	0.119	0.013	0.145
	-1.44	1.16	0.82	0.13	1.36
Observations	5320				
Log likelihood	-293831				
Wald <i>chi</i> 2(409)	212955.39				

Notes : Reported results are coefficient estimates. Z values are reported under each coefficient. We also control for a dummy for being non French, living with partner and living in urban areas.

Source : Enquête Emploi Insee 2010 (authors calculations). Unweighted estimates.

- Définition de demandeur d'emploi : La publication des effectifs de demandeurs d'emploi inscrits se fait selon les catégories statistiques suivantes :

- catégorie A : demandeurs d'emploi tenus de faire des actes positifs de recherche

TABLE B.11 – The determinants of the contract type (continued)

	Fixed contract		Temporary contract	
<b>Function type</b>				
Installation/repair/maintenance	-0.077	-1.28	0.043	0.62
Security/cleaning	0.650***	9.44	-0.704***	-5.17
Handling/warehousing/logistics	-0.013	-0.20	-0.661***	-6.37
Hospitality/secretarial	0.443***	7.16	-0.153	-1.49
Management/accounting	-0.045	-0.68	0.202**	2.06
Sales/Tech.Sales	-0.307***	-6.34	-0.307***	-4.98
Research& development	0.172***	2.85	-0.019	-0.20
Teaching/health care	1.046***	20.67	-0.316***	-3.85
Other functions	0.611***	12.82	-0.116*	-1.68
<b>Entry&gt;2008</b>	1.277***	39.53	1.030***	19.56
<b>Exeperience</b>	-0.120***	-18.96	-0.418***	-38.83
Mills	0.207	1.48	-0.334*	-1.79
Observations	33384			
Log likelihood	-58179.477			
Wald $\chi^2(182)$	12222.59			

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%

Note :Reported results are coefficient of each explanatory variable's effect on the contract type. Z values are reported next to each coefficient.

Source : Enquête Emploi Insee 2010. Observations unweighted.

d'emploi, sans emploi ;

- catégorie B : demandeurs d'emploi tenus de faire des actes positifs de recherche d'emploi, ayant exercé une activité réduite courte (i.e. de 78 heures ou moins au cours du mois) ;
- catégorie C : demandeurs d'emploi tenus de faire des actes positifs de recherche d'emploi, ayant exercé une activité réduite longue (i.e. plus de 78 heures au cours du mois) ;
- catégorie D : demandeurs d'emploi non tenus de faire des actes positifs de re-

- cherche d'emploi (en raison d'un stage, d'une formation, d'une maladie ...), y compris les demandeurs d'emploi en convention de reclassement personnalisé (CRP), en contrat de transition professionnelle (CTP), sans emploi et en contrat de sécurisation professionnelle (CSP) ;
- catégorie E : demandeurs d'emploi non tenus de faire de actes positifs de recherche d'emploi, en emploi (par exemple : bénéficiaires de contrats aidés).

### B.3 Employed and Unemployed job search

TABLE B.12 – The top 4 job search channels used by the currently unemployed young job seekers

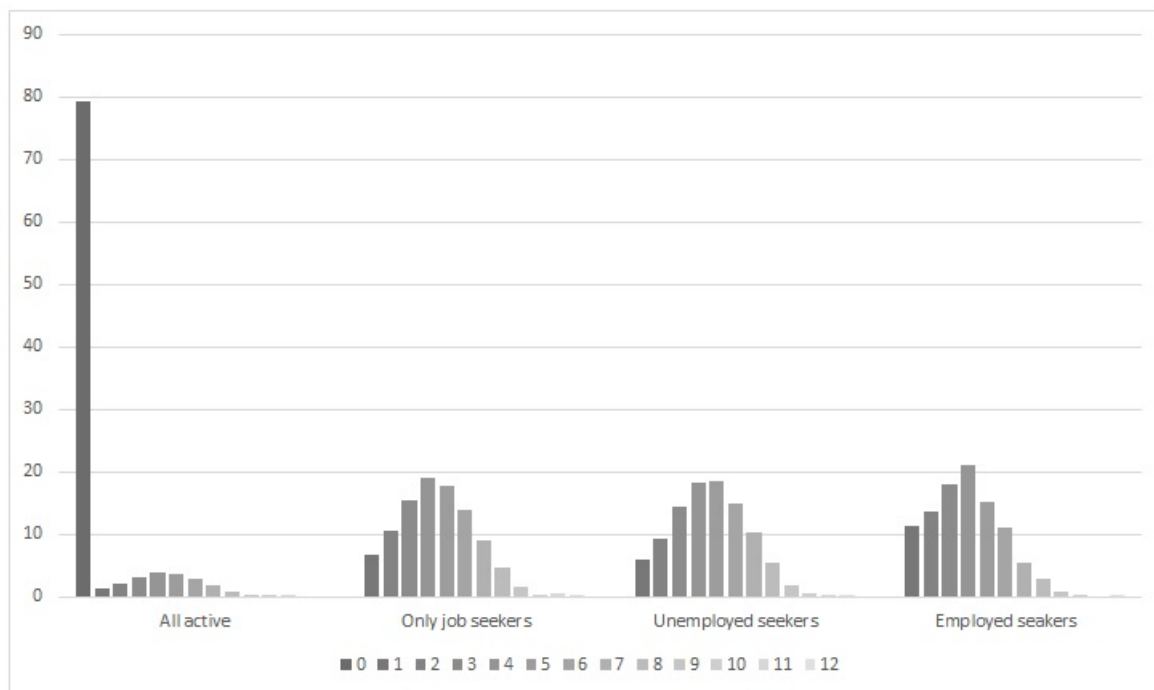
Ranking	Search methods	%
1	Job ads	88.67%
2	Public employment office	69.63%
3	Direct application	66.84%
4	Social networks	61.77%

FIGURE B.6 – Unemployment durations by age categories



Source : Enquête Emploi 2010, own calculations. Weighted statistics.

FIGURE B.7 – Number of channels used according to the search and labor status



Source : Enquête Emploi 2010, own calculations. Weighted statistics.

TABLE B.13 – Determinants of job search intensity

search intensity	Coef.	z
age	0,131***	3.45
Men with children	0,043	0.87
Women without children	0,018	0.72
Women with children	-0,199***	-5.50
With partner	-0,075***	-2.86
Non French	0,142***	4.00
Low education	0,170***	6.29
Average education	0,433***	10.97
High education	0,546***	13.37
Registered in PEO as JS	0,209***	8.94
unemployment benefits	0,169***	5.42
Occupation at the last job		
Craft/self-employed (Ref.NonManual)	-0,009	-0.09
High-skilled (Ref.NonManual)	-0,106**	-1.71
Semi-skilled (Ref.NonManual)	-0,071*	-1.91
Manual (Ref. NonManual)	-0,062**	-2.07
Unemployed (Ref.NonManual)	-0,251***	-7.84
<b>Employed JS</b> (Ref. Unemployed)	0,505***	18.96
average search duration (Ref. short)	0.011	0.38
long search duration (Ref.short)	-0.095***	-3.89
	coef	std-errors
cut1	-0,744	0,454
cut2	0,949	0,452
cut3	1,469	0,453
cut4	1,993	0,453
cut5	2,484	0,453
$\chi^2(52)$	1099.21	
log-likelihood	-17565.445	
Observations	11,274	

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1. z-values are reported.

Notes : The model estimated is an Ordered probit model. Reported estimations are the coefficient effects of each variable on the choice of a search intensity. The latter is measured by the number of different search methods used (5 levels of intensity). Additional control variables are the region of residence (22), living in urban (if not rural) area and the parents' occupation (7 options).

Source : Enquête Emploi 2010, author's calculations.

TABLE B.14 – The probability of being unemployed rather than employed

Variables	Coefficient	Marginal effects
Age	-0.031 (-1.20)	-0.000 (-1.20)
Age <sup>2</sup>	0.002*** (4.18)	0.000*** (4.17)
Women	-0.096*** (-7.17)	-0.001*** (-7.13)
Non French	0.047* (1.86)	0.000* (1.86)
Children ( <i>if any</i> )	0.024 (0.90)	0.000 (0.92)
With partner	0.208*** (10.65)	0.002*** (12.09)
<b>Education level</b>		
No diploma	-	-
Low education	-0.356*** (-19.28)	-0.003*** (-18.55)
Average education	-0.749*** (-31.71)	-0.007*** (-28.81)
High education	-0.851*** (-33.80)	-0.008*** (-30.34)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

z-statistics in parentheses. Observations are weighted.

Notes : Mother's occupation omitted due to collinearity. The model estimated is a Probit model. Reported estimations are the marginal effects of each variable on the probability of finding a job. The predicted probabilities are then used in our two-step procedure.

Source : Enquête Emploi 2010, own calculations.



TABLE B.15 – The probability of being unemployed rather than employed

Variables	Coefficient	Marginal effects
<b>PEO registration</b>		
Registered as a job seeker	-0.318*** (-20.89)	-0.003*** (-19.99)
Unemployment benefit	-0.079*** (-4.09)	-0.001*** (-4.09)
<b>Unemployment reasons</b>		
Other reasons	-	-
Previously on training	0.311*** (16.74)	0.003*** (16.28)
End of temporary job	0.549*** (26.06)	0.005*** (24.39)
Lay-off	0.389*** (13.23)	0.003*** (13.00)
Voluntary quit	0.465*** (12.88)	0.004*** (12.67)
<b>Housing type</b>		
Free housing (with parents)	-	-
Owner	0.319*** (8.94)	0.003*** (8.87)
Social housing	0.312*** (8.27)	0.003*** (8.21)
Private rent	0.122*** (3.47)	0.001*** (3.47)

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

z-statistics in parentheses. Observations are weighted.

Notes : Mother's occupation omitted due to collinearity. The model estimated is a Probit model. Reported estimations are the marginal effects of each variable on the probability of finding a job. The predicted probabilities are then used in our two-step procedure.

Source : Enquête Emploi 2010, own calculations.

TABLE B.16 – Determinants of on-the-job search by gender

Base : Employed not searching	On-the-job seekers	
	Women on-the-job seekers	Men on-the-job seekers
Children	0,045	-0,042
	0,668	-0,513
With partner (Ref.single)	-0,034	-0,007
	-0,562	-0,106
Non-French (Ref.French)	-0,141	-0,277
	-1,233	-2,171
Low education (Ref.no diplomas)	0,095	0,190
	1,282	2,658
Average education	0,095	0,198
	0,837	1,911
High education	0,201	0,356
	1,530	2,706
Urban (Ref.rural)	-0,111	0,074
	-1,577	0,989
Fixed-term contratct (Ref.permanent)	0,366	0,365
	4,900	4,109
temporary job (Ref.permanent)	-0,055	0,068
	-0,315	0,353
Statistics		
$\chi^2(46)$	126,415	183,866
Observations	5036	6124
Wald test of wage exogeneity $\chi^2(1)$	4.38**	6.32**

\*Significant at 10%; \*\* at 5% and \*\*\* at 1%

Note :Reported results are coefficient of each explanatory variable's effect on the probability of being on-the-job searcher. Z values are reported next to each coefficient. Additional explanatory variables are the function type (10 alternatives) and the region of residence (22 regions).

Source : Enquête Emploi 2010, author's calculations. Weighted statistics.

TABLE B.17 – Determinants of on-the-job search by gender

Base : Employed not searching	On-the-job seekers	
	Women on-the-job seekers	Men on-the-job seekers
Public sector (Ref.private)	-0,007	-0,208
	-0,087	-2,068
Social.net (Ref.direct app)	0,107	0,018
	1,681	0,290
School.net (Ref.direct app)	-0,138	-0,516
	-1,138	-3,373
Public agencies (Ref.direct app)	0,111	0,325
	1,253	3,365
Private agencies (Ref.direct app)	0,304	0,235
	1,516	1,556
Other channels (Ref.direct app)	-0,066	-0,126
	-0,518	-1,022
Entry after crisis (Ref.entry before 2008)	0,168	0,103
	2,396	1,561
ln(wage)	0,153	0,325
	0,536	1,231
$\rho$	-0,266	-0,249
	-2,093	-2,513
Statistics		
$\chi^2(46)$	126,415	183,866
Observations	5036	6124
Wald test of wage exogeneity $\chi^2(1)$	4.38**	6.32**

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Note :Reported results are coefficient of each explanatory variable's effect on the probability of being on-the-job searcher. Z values are reported next to each coefficient. Additional explanatory variables are the function type (10 alternatives) and the region of residence (22 regions).

Source : Enquête Emploi 2010, author's calculations. Weighted statistics.



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# Résumé



## Introduction

Le taux de chômage des jeunes de 15-30 ans ne cesse d'augmenter en France depuis 2008. Il représente en 2016 plus que deux fois celui de la population active (25% comparé à 10.3% (Eurostat, 2016)). Par conséquent, l'accès des jeunes à l'emploi dans le pays constitue une préoccupation majeure aussi bien sur le plan économique que social. Si l'emploi des jeunes figure parmi les actions urgentes à entreprendre, il est ainsi important de s'interroger sur les facteurs, comme la stratégie de recherche d'emploi, qui sont susceptibles de conditionner significativement le recrutement ainsi que la qualité de l'emploi. C'est le parti pris de ce travail doctoral. En effet, cette thèse se focalise sur l'analyse de l'"employabilité" des jeunes en France à travers l'étude de trois axes principaux : la recherche, l'accès et la qualité de l'emploi.

Tout d'abord, il convient de définir l'employabilité. A priori, il n'existe pas une définition officielle et unique de l'employabilité à part que celle-ci renvoie à la capacité d'un individu à être employé (Cart, 1998). Ce concept fait référence aussi à la capacité d'un individu à faire évoluer ses perspectives de carrière et ses performances sur le marché du travail. C'est ainsi qu'une définition du Canadian Labor Force Development Board (1994) indique que "L'employabilité est la capacité relative que possède un individu à obtenir un emploi satisfaisant compte tenu de l'interaction entre ses propres caractéristiques personnelles et le marché du travail" (Gazier, 1999))."

Dans ce sens, étudier l'employabilité des jeunes va de pair avec l'étude de leurs stratégies de recherche d'emploi. En effet, la phase de recherche d'emploi est d'une importance cruciale puisqu'elle affecte la probabilité de s'insérer efficacement sur le marché du travail. Cette étape de recherche d'emploi a suscité l'intérêt de plusieurs chercheurs dont Myers and Shultz (1951); Stigler (1961, 1962) Rees and Shultz (1970); Jovanovic (1979, 1984); Corcoran et al. (1980); Mortensen (1986); Granovetter (1974, 1995). Ces auteurs étudient les modes à travers lesquels les individus trouvent un travail. Autrement dit, si les emplois sont obtenus grâce à des annonces, cabinets de recrutement, application directe, réseaux

ou tout autre mode de recrutement.

Ainsi, afin d'examiner l'employabilité des jeunes, nous sommes amenés dans ce qui suit à nous interroger aussi sur le rôle que peut jouer l'étape de la recherche d'emploi en se focalisant sur l'étude des modes d'accès ainsi que leurs effets sur la qualité des emplois obtenus.

Comment améliorer donc l'employabilité des jeunes et garantir ainsi leur stabilité sur le marché du travail ? La question de l'insertion professionnelle des jeunes a depuis au moins trois décennies occupé l'espace du débat publique Français dans le pays. Depuis 1975, une variété de politiques d'aide à l'emploi des jeunes a été proposée et mise en place par différents acteurs de la vie politique. Ces différentes mesures touchent des publics différents et offrent des statuts différents aux jeunes bénéficiaires. Ces politiques visent surtout le renforcement du rôle des acteurs publics dans l'insertion professionnelle des jeunes, mais aussi à rendre le recrutement de ces jeunes plus attractif à l'égard des entreprises.

Parmi ces dispositifs figure un ensemble de mesures visant la pédagogie et l'enseignement (Ryan, 2001). Ces mesures s'appuient sur l'idée que le problème de l'insertion des jeunes vient d'un problème d'enseignement qui ne concorde pas avec les besoins réels du marché. Ces mécanismes proposés par l'Etat ont pour vocation de rendre plus fluide la transition de l'école à l'emploi. Ceci, par le biais de dispositifs tels que le programme d'alternance : contrat d'apprentissage, contrat d'adaptation et contrat de qualification. En effet, pour certains auteurs, il s'agirait d'un problème d'employabilité dut à une défaillance dans la transition de l'école à l'emploi<sup>4</sup>.

Ainsi un rapprochement entre la théorie et la pratique apparaît comme un objectif primordial pour ces dispositifs dans le but de rendre plus concret l'adéquation entre com-

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4. Plus tard dans ce chapitre introductif, une section abordera certains travaux en France qui se sont intéressés au problème de la transition de l'école à l'emploi ainsi qu'à l'importance du niveau d'éducation dans l'insertion. Une analyse intéressante est présentée par Behrens et al. (2007), "La transition de l'école à la vie active ou le constat d'une problématique majeure", *Institut de recherche et de documentation pédagogique (IRDPA)*

pétences acquises à l'école et savoirs nécessaires dans l'entreprise. Les dispositifs en alternance sont les plus importants en terme de nombre de bénéficiaires puisque ces actions visent environ deux tiers des bénéficiaires de l'ensemble des mesures de la politique de l'emploi en faveur des jeunes (Issehnane, 2009).

Compte tenu de ces mesures et afin de faire face au chômage, les jeunes mettent en place des stratégies différentes afin d'augmenter leurs chances de trouver un emploi. Certains choisissent de cumuler des contrats précaires dans le but d'acquérir une expérience ou un emploi stable à long terme à travers le développement d'un réseau de contacts professionnels. D'autres choisissent d'investir dans la recherche d'emploi à travers des procédures formelles (ou institutionnelles : agences publiques, agences privées, annonces, concours) ou d'autres informelles (par réseaux personnels, professionnels et scolaires ou candidatures directes). Ainsi, l'insertion professionnelle commence d'abord par l'étape de la prospection "job search". Cette étape est d'une importance cruciale dans la détermination de la trajectoire professionnelle des individus. La stratégie de prospection diffère selon le jeune, ses qualifications et son environnement socio-économique. Cette phase de recherche d'emploi suscite depuis longtemps l'intérêt de plusieurs auteurs. Les pionniers sont principalement Stigler (1961), Diamond (1982), Jovanovic (1979, 1984), Mortensen (1987), Mortensen and Vishwanath (1994), Mortensen and Pissarides (1999).

Toutefois, si la littérature économique est riche en ce qui concerne la modélisation de la recherche d'emploi, elle reste à ce jour peu développée lorsqu'il s'agit d'expliquer le choix des stratégies mobilisées par les jeunes afin de s'insérer sur le marché du travail (Kramarz et Skans, 2011). Plus précisément il reste à savoir dans quelle mesure le recours des jeunes aux méthodes informelles plutôt que institutionnelles permet-il à la fois l'accès à l'emploi mais aussi l'amélioration de la qualité de ce dernier ? D'où l'intérêt de ce travail doctoral, à savoir l'influence des modes de recherche d'emploi sur l'employabilité des jeunes.

Cette thèse vise à apporter des réponses à ces questions en utilisant une approche empirique à partir de données représentatives des travailleurs jeunes en France. Ce travail

doctoral a pour objectif de fournir un ensemble de suggestions permettant d'évaluer et de comparer l'efficacité des différents canaux de recherche d'emploi en particulier les réseaux sociaux. Il faut noter que ce travail de recherche n'est pas le premier à souligner l'importance des réseaux sociaux sur le marché du travail. Il existe une littérature considérable tenant compte de l'impact des réseaux personnels à travers l'information qu'ils transmettent. Toutefois, en considérant uniquement les jeunes actifs, cette thèse distingue clairement entre deux types de réseaux : le réseau personnel ou professionnel et le réseau formé par l'établissement scolaire. Cette distinction est très peu explorée dans la littérature existante et qui s'inscrit donc parmi les apports de ce travail de recherche.

Dans le premier chapitre, les déterminants de l'accès à l'emploi à travers un mode de recherche bien déterminé sont analysés. Dans le cadre de ce chapitre, les effets de certains facteurs tels que l'origine, le genre, le lieu de résidence et l'éducation sont mis en évidence.

Le deuxième chapitre s'interroge sur l'influence des modes d'accès sur la qualité et la satisfaction de l'emploi obtenu. Dans ce cadre d'analyse, nous montrons que parmi les individus en emploi, une part considérable affiche une insatisfaction par rapport à leur emploi. Ces jeunes insatisfaits vont donc se retrouver de nouveau sur le marché de travail afin de trouver un nouvel emploi qui correspond mieux à leurs attentes.

Il en découle donc dans un troisième chapitre de se focaliser sur les actifs (chômeurs inclus) à la recherche d'emploi afin de comprendre leurs préférences et leurs stratégies de prospection. Cette dernière partie de la thèse est dédiée à la comparaison entre les pratiques en termes d'intensité et de préférences utilisées par les individus en emploi et celles menées par les chômeurs.

Tout d'abord, une présentation de l'état des lieux du marché du travail des jeunes en France semble indispensable.

Labaye et al. (2012) estiment que pour que la France puisse répondre à ses ambitions "même modérées" en matière d'emploi, elle doit créer deux fois plus de nouveaux emplois chaque année par rapport à ce qu'elle a déjà fait au cours des 20 dernières années. Le même

rapport suggère que si la France n'agit pas de manière efficace, le pays est susceptible de se retrouver d'ici 2020 face à 2,2 millions de travailleurs hautement qualifiés et 2,3 millions de travailleurs peu qualifiés, incapables d'accéder à un emploi. Le problème du chômage des jeunes peut être expliqué par la conjoncture en plus des différentes transformations qui caractérisent leur marché du travail.

En effet, la forte concentration des jeunes dans des contrats à court terme et travail temporaire (considérés comme des emplois précaires) peut expliquer pourquoi leur emploi est si sensible aux cycles économiques<sup>5</sup>. Ces derniers sont deux types de contrats associés à une grande sensibilité aux fluctuations conjoncturelles. Ce constat est souligné clairement dans un rapport récent de la DARES (2013), où ils montrent qu'à la fois pour un premier accès ou après une courte expérience, les actifs âgés de 15-24 ans sont plus sensibles aux changements cycliques comparés aux autres actifs ayant davantage d'expérience professionnelle (DARES, 2013). Labaye et al. (2012) mettent en évidence que si la part du travail précaire représente 13% des emplois en France, elle représente aussi 60% des emplois détruits depuis la crise.

Si certains auteurs mettent en avant que le taux de chômage des jeunes est d'autant plus élevé durant les périodes de récession économique, est-il possible alors de considérer la crise comme principale cause de la précarité des jeunes sur le marché du travail en France ? A ce sujet, un certain nombre d'études prouve que la crise économique de 2008-2009 n'a fait qu'aggraver la situation précaire de l'emploi des jeunes (Lefresne, 2012). En effet, il y a eu une émergence de certains problèmes affectant la transition de l'école à l'emploi (Scarpetta et al., 2010). Avant que la grande crise économique se manifeste, le marché de travail des jeunes s'était quelque peu amélioré dans la plupart des pays de l'OCDE y compris la France. En effet, les entreprises cherchaient à recruter plus de jeunes afin d'améliorer la productivité, diversifier la culture d'entreprise et exploiter de jeunes compétences et de nouvelles qualifications.

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5. Un tiers des 15-29 ans possèdent un emploi à statut précaire, contre 8% des 30-49 ans (Observatoire des inégalités, 2014)

Kahn (2010) montre que les conséquences du marché du travail des diplômés de l'université dans une mauvaise économie ont de grands effets négatifs qui persistent sur les salaires. Les gains sont nettement inférieurs à ce qu'ils auraient pu être si le diplômé intègre le marché du travail au bon moment. De plus, ils rajoutent que les cohortes qui obtiennent leur diplôme dans une situation économique critique ont tendance à se retrouver dans des emplois précaires. Les travaux de Giuliano et Spilimbergo (2009) suggèrent que les jeunes qui grandissent pendant les récessions ont tendance à croire que le succès dans la vie dépend plus de la chance que de l'effort.

Ainsi, au-delà des problèmes liés à la crise, la transition de l'école à l'emploi et le "déclassement des diplômés", ce travail doctoral étudie le rôle joué par les différents canaux de recherche ainsi que leur performance sur le marché du travail des jeunes.

Après avoir mis en évidence le contexte et l'intérêt de la thèse. Le restant de cette introduction générale s'organise comme suit. Une première section discute l'importance du niveau d'éducation et donc du diplôme comme un signal de productivité et/ou une protection contre le chômage. La deuxième section s'intéresse aux récents changements qui ont caractérisé le travail des jeunes en France. La troisième section est consacrée au rôle que peuvent jouer les canaux d'accès à l'emploi. La quatrième section est consacrée à la distinction entre demandeurs d'emploi selon leur statut sur le marché du travail, à savoir chômeurs ou en emploi. Enfin, la dernière section est dédiée au résumé des apports des trois chapitres empiriques formant cette thèse.

## **La protection relative offerte par le diplôme**

Dans les années soixante, les travaux à l'origine des fondements de la théorie du capital humain, soulignent que l'éducation est l'investissement le plus efficace afin d'améliorer la productivité individuelle et garantir la croissance globale (Becker, 1975). Dès lors, l'éducation est envisagée comme un investissement rentable à termes, permettant de se protéger contre le chômage.



En général, il existe une grande disparité en matière d'emploi chez les jeunes qui ont quitté l'école dans les pays de l'OCDE. Le taux d'emploi des jeunes âgés de 15-29 ans qui ont un diplôme de l'enseignement supérieur est plus élevé que celui des jeunes qui ont un diplôme du secondaire qui est à son tour plus élevé que les jeunes sans diplôme.

Dans ce sens, l'observation du taux de chômage en fonction du niveau de scolarité, montre que ce taux est "inversement proportionnel" au niveau du diplôme. En général, plus le niveau de diplôme possédé est élevé, plus le taux de chômage diminue. Laflamme (1996), souligne que l'importance d'un diplôme dépend de son marché, c'est-à-dire de sa rareté ou de son abondance.

Face à cette situation, les jeunes sont incités à acquérir des niveaux d'éducation de plus en plus élevés en contre partie des promesses d'emploi et de salaires croissants en fonction des diplômes obtenus. Seulement, la question qui se pose à ce niveau est la suivante : l'augmentation du niveau d'éducation des diplômés est-elle accompagnée d'une situation plus avantageuse sur le marché du travail ? Autrement dit, le diplôme possède-t-il toujours une valeur privilégiée sur le marché et protège-t-il contre le chômage et la précarité ?

La théorie du filtre (Arrow, 1973) souligne que le système d'éducation n'accroît pas les capacités productives des individus mais joue le rôle de signal et de filtre en situation d'asymétrie d'information. Par conséquent, les plus diplômés se verront attribuer des emplois plus qualifiés et plus stables. Cette situation génère des disparités au niveau des salaires en asymétrie d'information, ce qui induit une certaine inégalité entre les gains individuels et les gains collectifs que rapporte l'éducation. En effet, il y aura une inégalité entre la productivité et la rémunération associée.

Dans cette perspective, les compétences des agents seront dévaluées ce qui engendre un "déclassement salarial". Si l'éducation n'est pas adaptée à la demande du marché et qu'elle ne parvient pas à développer des niveaux différents mais élevés de productivité, alors la demande d'emploi va concerner un nombre élevé d'individus disposant d'un même niveau de diplôme. Par conséquent, le processus de différenciation sera défaillant, ce qui sera à l'origine d'une dévalorisation des diplômes.

Il s'en suit que le rythme croissant des détenteurs de diplômes n'arrête pas de croître, mais pas dans le même rythme que celui de l'offre d'emploi. Celle-ci a tendance à baisser particulièrement ces dernières années, pour des raisons différentes dont certaines sont citées précédemment dans cette introduction générale. Il en découle ce que certains auteurs qualifient de la "surenchère" des diplômes, expliquée par l'augmentation du nombre d'individus scolarisés et par l'existence de travailleurs diplômés sur un marché d'emploi de plus en plus rétréci. Y a-t-il, donc, toujours un lien entre le diplôme, le type d'emploi et le salaire ?

Il est alors nécessaire d'agir sur la transition de l'école à l'emploi afin que le groupe des "jeunes débutants en mal d'insertion" accède rapidement à des emplois offrant de meilleures perspectives de carrière. Ceci doit passer impérativement par l'adaptation de l'éducation aux besoins du marché de travail mais aussi par le développement du rôle des établissements scolaires comme intermédiaires de recrutement.

Dans ce sens, la France a mis en place un plan d'urgence pour l'emploi des jeunes annoncé en avril 2009 visant un ensemble d'actions dans le but de favoriser l'apprentissage et d'offrir la possibilité de cumuler études et travail. Ce plan d'urgence concerne aussi la mise en place d'un ensemble de mesures afin de soutenir l'emploi des jeunes défavorisés dans le pays<sup>6</sup>. C'est ainsi que la professionnalisation de l'éducation (système dual) a permis à plusieurs jeunes d'approcher le marché du travail avant même d'obtenir un diplôme. Le développement du rôle des réseaux d'anciens diplômés (ou réseaux alumni) ainsi que le rapprochement entre entreprises partenaires et établissements de formation a aussi permis une meilleure transition de l'école à l'emploi. Le phénomène des réseaux d'anciens (ou réseaux alumni) est encore largement ignoré par la littérature scientifique (Menger et al., 2015).

Ces réseaux d'alumni sont en général plus développés dans les Grandes Ecoles de Com-

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6. Réunion de l'OCDE au niveau ministériel sur l'emploi et le travail "OCDE (2009), "Faire face à la crise de l'emploi Les réponses des politiques sociales et de l'emploi" sous le "thème 3 : Aider les jeunes à s'insérer durablement sur le marché du travail". Paris, 28-29 septembre 2009.

merce, de Management ou d'Ingénieurs. Au sein de ces organismes, l'acquisition de capital social et celle de capital humain sont d'autant mieux assorties que les candidats ont été préalablement formés puis soigneusement distribués dans la hiérarchie des écoles. L'internationalisation du marché des formations à la gestion, au management, etc., avec sa structuration des alliances entre les établissements par classe de qualité, élargit le rendement du capital social procuré par les études. Au total, les mécanismes d'amplification cumulative des gains de capital social s'emboîtent. Les choix professionnels et les décisions managériales d'un professionnel incorporent les effets d'interaction avec ses compagnons d'études sélectives (Shue, 2013).

Le capital social des écoles est géré et exploité dans les réseaux d'interaction entretenus entre les diplômés d'une cohorte, et entre les diplômés de l'école, via la conversion des diplômés en alumni.<sup>7</sup> Un diplômé est d'autant plus aisément converti en un contributeur et un dépositaire actif de la marque de son école que ses décisions incorporent les effets des réseaux d'interaction qui ont été créés pendant ses études et qui ont pu être maintenus au-delà. Le jeu est à trois partenaires : le diplômé, la communauté organisée des diplômés et l'école. Sans la mise en circulation d'une monnaie d'échange, le capital social, le jeu ne fonctionne pas. Et sans conversion du capital social en capital contributif (en investissement dans son capital), l'école n'est pas en mesure d'entretenir l'accumulation et la redistribution du capital social entre toutes les parties prenantes (Menger et al., 2015).

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7. Selon l'enquête réalisée par Moingeon (2003) ; voir aussi Moingeon, Lehmann-Ortega (2007)) : sur le marché français de la formation continue des managers et des cadres dirigeants d'entreprise, 20 à 25 % de ce marché sont détenus par les établissements supérieurs de gestion et, parmi eux, les trois grandes écoles de gestion franciliennes réalisent 60 % du chiffre d'affaires cumulé. Selon les données citées par la Cour des comptes en 2013 (op. cit., p. 317), la formation continue représente 24 % du chiffre d'affaires de HEC et 34 % de celui de l'ESSEC, contre moins de 3 % en moyenne dans le budget des autres écoles.

## Emergence des nouvelles formes d'emploi

Dans le cadre de ce travail doctoral, le deuxième chapitre s'intéresse à la qualité des emplois que les jeunes obtiennent. Afin d'examiner cela, une distinction est faite entre les attributs objectifs et subjectifs qui résultent de chaque emploi. Par les attributs objectifs, nous entendons le type de contrat, le salaire et l'ancienneté dans l'emploi actuel. Quant aux attributs subjectifs, il s'agit de la satisfaction éprouvée par les travailleurs vis à vis de leur emploi.

Ainsi, cette thèse considère le contrat comme une mesure objective de la qualité de l'emploi obtenu. Il existe 3 grands types de contrats : Le contrat CDI (à durée indéterminée), CDD (à durée déterminée) et le contrat temporaire (intérimaire, saisonnier, apprentissage, etc.). L'objectif de l'étude du type de contrat est d'expliquer la probabilité qu'un jeune travailleur se retrouve dans le cadre d'un emploi permanent (CDI) et donc sécurisé.

Un emploi permanent et stable est objectivement défini comme un contrat assurant une certaine sécurité financière et professionnelle. Le Code du Travail réserve aux seuls CDI les embauches destinées aux emplois stables et permanents dans l'entreprise. Le Code du Travail prévoit qu'un contrat à durée déterminée ne peut pas pourvoir durablement un emploi lié à l'activité normale et permanente de l'entreprise. Le contrat CDD est réservé aux seules situations où l'entreprise doit faire face à un besoin ponctuel de main d'oeuvre supplémentaire pour réaliser une tâche précise et temporaire. Dès qu'un poste correspondant à un emploi stable et durable lié au fonctionnement habituel de l'entreprise se crée ou se libère, il doit être pourvu par une embauche faite par CDI.

C'est ainsi que le contrat de travail à durée indéterminée (CDI) est associé à la forme normale et générale de la relation de travail<sup>8</sup>. Différemment, un contrat à durée déterminée est conclu pour une durée limitée et précisée, au départ, dans le contrat. Il prend fin soit à la date fixée soit - en l'absence de terme précis - lorsque se réalise l'objet pour lequel il

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8. Source : [travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-de-travail-a-duree-indeterminee-cdi](http://travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-de-travail-a-duree-indeterminee-cdi). Consulté le 17/05/2016.

a été conclu (retour du salarié remplacé, fin de la saison, etc.)<sup>9</sup>.

Dans le cas des emplois temporaires par exemple, il s'avère que les actifs récents sont plus susceptible d'être recrutés dans le cadre de ce type de contrat de travail comparés aux actifs anciens. En 2014, Guggemos and Vidalenc (2015) publient dans un rapport de l'Insee que les salariés de moins de 25 ans, entrés plus récemment sur le marché du travail, occupent moins souvent des emplois en CDI (46% d'entre eux). Selon la même source, les embauches par le biais d'un CDI en 2014 représentent 86.4% des emplois en France, 9,7% sont en CDD, 2,4 % en intérim et 1,6 % en apprentissage. Les femmes occupent trois emplois en CDD sur cinq, mais elles sont deux fois moins nombreuses que les hommes parmi les intérimaires et les apprentis (Insee, enquête Emploi 2014).

Ainsi, ces nouvelles formes ont de plus en plus tendance à rendre "caduque" la norme (CDI) du moins dans certains secteurs et sont donc en voie de faire, à terme, norme sur des segments entiers du marché de travail. Ce constat se justifie par les pratiques de recrutement de certaines entreprises ou secteurs favorables à ce type de contrat. Toutefois, dans certains cas ces contrats particuliers peuvent donner lieu à des contrats CDI. Dans ce cas le recours à ces emplois atypiques peut être considéré comme un tremplin vers des emplois permanents (CDI). Cancé and Fréchou (2003), soulignent que seulement un quart des intérimaires et un tiers des salariés en CDD en 2001 ont muté vers un CDI un an plus tard. L'offre d'emploi est conditionnée, entre autres, par les qualités et attitudes qu'éprouve le candidat à l'embauche à l'image de la motivation, le degré de leadership, d'implication.

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9. Le contrat de travail à durée déterminée est renouvelable deux fois pour une durée déterminée (la possibilité de renouveler les CDD deux fois, au lieu d'une seule précédemment, résulte de la loi du 17 août 2015. L'article 55 de la Loi numéro 2015-994 du 17 août 2015 relative au dialogue social et à l'emploi est venu modifier le régime du renouvellement du contrat de travail à durée déterminée, défini par l'unique article L.1243-13 du code du travail. Il s'applique également aux contrats en cours à la date d'entrée en vigueur de cette loi. Les conditions de renouvellement sont stipulées dans le contrat ou font l'objet d'un avenant soumis au salarié avant le terme initialement prévu. Source : [travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-a-duree-determinee-cdd](http://travail-emploi.gouv.fr/droit-du-travail/contrats-et-carriere/contrats-de-travail/types-de-contrats/article/le-contrat-a-duree-determinee-cdd). Consulté le 17/05/2016.

Il s'agit des critères inobservables et intrinsèques qui viennent s'ajouter à la valorisation des acquis scolaires et des diplômes.

En conclusion, pour la plus part des cas, "une norme" en matière de contrat de travail est le CDI à temps plein avec employeur et lieu de travail uniques. Le travail "atypique," "non-standard" ou temporaire (Le contrat à durée déterminée (CDD), le travail intérimaire, les emplois d'avenir, les contrats aidés, l'alternance et l'apprentissage, le travail à temps partiel, le télétravail, etc.) sont définis par rapport à cette désignation comme une exception. Cette distinction justifie parfaitement la raison pour laquelle nous considérons que le contrat est un indicateur de la sécurité et de la qualité de l'emploi. L'analyse de cet indicateur dans le deuxième chapitre nous permettra d'apporter des conclusions quant aux facteurs qui influencent la probabilité de se retrouver plutôt dans un contrat CDI qui est la "norme". Parmi ces facteurs l'impact des intermédiaires de recrutement qu'ils soient formels ou informels est mis évidence.

## **Canaux formels et informels de recherche d'emploi**

Rappelons qu'en plus des méthodes traditionnelles de recherche d'emploi (intermédiaires institutionnels publics et privés, annonces, concours), il existe aussi d'autres méthodes alternatives telles que les réseaux personnels, professionnels et scolaires (et réseaux sociaux virtuels sur Internet) mais aussi les candidatures spontanées appelées aussi méthodes informelles. Celles-ci semblent être plus populaires au cours d'une période de récession, caractérisée par des taux de chômage élevés (Kramarz and Skans, 2014). Les demandeurs d'emploi peuvent préférer ces canaux informels, non seulement pour leurs faibles coûts, mais aussi car ils permettent de réduire, du côté des employeurs, les caractéristiques non observées de la productivité des candidats, et du côté des travailleurs, les caractéristiques non observées de l'emploi trouvé.

Les travaux aussi bien théoriques qu'empiriques sont souvent d'accord avec le fait que le mode "réseaux de contacts personnels" est meilleur en matière de transmission d'infor-

mations que les méthodes formelles déjà décrites (Mortensen, 1987, Devine and Kiefer, 1993). Différemment, Bortnick and Ports (1992), constatent que la plus forte probabilité de trouver un emploi est remarquée chez ceux qui mobilisent les agences privées même si les demandeurs d'emploi utilisent très souvent des candidatures spontanées. Addison and Portugal (2002) montrent que les services publics d'emploi apparaissent moins efficaces en générant des salaires plus bas et des contrats plus courts.

Cependant, Osberg (1993) montre que les canaux de recherche d'emploi changent avec le cycle économique et souligne un problème de sélection dans le choix des stratégies de recherche d'emploi (principalement pour ceux qui utilisent les organismes publics de l'emploi). Dans ce même sens, Fougère et al. (1998) considèrent le rôle du service national de l'emploi en France ( "Pôle d'Emploi") sur le taux de sortie du chômage. Ces deux études soulignent un impact significatif des intermédiaires de recrutement sur la probabilité de trouver un emploi en considérant un seul type de méthodes formelles : les intermédiaires institutionnels (publiques ou privées) en concurrence avec les procédures "marchandes" (candidatures spontanées et annonces).

D'autres auteurs montrent que la combinaison de plusieurs procédures de recherche d'emploi permet non seulement de créer des disparités en termes de qualité et de quantité de l'information, mais elle affecte aussi le coût de la recherche et le processus de génération des offres d'emploi (Autor, 2001, Freeman, 2002, Fountain, 2005). Sabatier (2002), inspirée par Barron and Mellow (1979), propose un modèle structurel de recherche d'emploi en fonction des méthodes de recherche utilisées et avec une intensité de recherche endogène. L'approche de l'auteur consiste à introduire les canaux de recherche grâce à une fonction de production de l'information afin de montrer que ces derniers affectent à la fois le taux d'arrivée des offres mais aussi les coûts de recherche. Sabatier (2002) souligne que les méthodes de recherche d'emploi ont un effet discriminatoire sur la durée du chômage.

Holzer (1988), étudie un modèle de recherche d'emploi où il fait valoir que le choix de la stratégie de recherche dépend de son coût relatif et de sa rentabilité espérée (en termes d'attributs monétaires et non monétaires des offres d'emploi qui lui sont associées). Dans le

même sens, Bachmann and Baumgarten (2013) concluent que, plutôt que son faible coût, ce sont bien les avantages attendus du mode informel qui expliqueraient son utilisation. C'est pourquoi la majorité des données empiriques montrent que les méthodes de recherche les plus fréquemment utilisées (réseaux personnels et candidatures spontanées), sont aussi les plus productives, car elles permettent plus que d'autres, l'accès à l'emploi.

Ainsi, l'étude de la relation qui puisse exister entre la méthode d'accès à l'emploi utilisée et les caractéristiques du travail obtenu semble nécessaire afin de comprendre dans quelle mesure ces méthodes formelles ou informelles peuvent influencer différemment et de manière significative la qualité d'emploi. Par ailleurs, nous notons que peu d'études prennent en compte l'impact de la dernière récession dans la recherche d'emploi. Cette thèse tente ainsi d'explorer ce point, au niveau des deux derniers chapitres puisque nous tenons compte de l'année d'entrée à l'emploi (avant ou après l'année 2008) afin d'analyser l'impact de la récession sur la façon dont les employeurs et les employés sont appariés sur le marché du travail.

En effet, la réussite de la recherche d'emploi ne dépend pas seulement de la capacité à trouver un travail, mais elle peut être aussi affectée par d'autres facteurs externes. Par exemple, si le marché du travail est saturé ou si l'individu réside loin d'un bassin d'emploi, ceci peut limiter ses approches et son effort de recherche d'emploi. Généralement, le comportement des chercheurs d'emploi est modélisé par l'effort de ces derniers durant la période de prospection. Le dernier chapitre de la thèse (Chapitre 4) propose d'utiliser le nombre des méthodes de prospection utilisées comme mesure de l'intensité de la recherche d'emploi. Très peu d'études considèrent cette variable (le nombre de modes de recherche utilisées) comme mesure de l'intensité. En utilisant cette approche, Sabatier (2002) montre que le taux d'arrivée des offres d'emploi dépend positivement de l'intensité de l'effort de recherche ainsi que de la combinaison de plusieurs méthodes de recherche d'emploi.

Ainsi, l'étude des caractéristiques qui influencent directement l'intensité de la recherche d'emploi, devrait fournir plus d'information sur la façon avec laquelle les jeunes demandeurs d'emploi (qu'ils soient chômeurs ou en emploi) tentent de quitter ce statut. Le choix de



l'intensité de recherche d'emploi n'est autre que le résultat d'une procédure dépendante des caractéristiques individuelles, socio-démographiques mais aussi du statut du demandeur d'emploi sur le marché du travail.

Cependant, ce seul paramètre ne suffit pas pour caractériser le comportement de recherche d'emploi. Il est également important d'étudier le choix de la stratégie d'emploi et d'examiner les préférences, à la fois des chômeurs mais aussi des demandeurs d'emploi qui possèdent déjà un. Cette distinction est nécessaire dans la mesure où il est important de discuter l'hypothèse selon laquelle ces deux types de demandeurs d'emploi se retrouvent en directe concurrence sur le marché de travail. Ceci figure d'ailleurs parmi les axes de recherche de cette thèse. Le chapitre 4 discute, entre autres, cette hypothèse et fournit des réponses.

## Recherche d'emploi des chômeurs et des employés

Les demandeurs d'emploi sont par définition "des individus qui s'inscrivent à Pôle Emploi. Ces demandeurs sont enregistrés à Pôle Emploi dans différentes catégories de demandes d'emploi en fonction de leur disponibilité, du type de contrat recherché et de la quotité de temps de travail souhaité<sup>10</sup>".

Ces individus peuvent donc être des chômeurs à la recherche d'emploi ou bien des personnes en emploi mais qui recherchent un autre. Les difficultés d'insertion pour les premiers sont déjà abordées précédemment dans cette introduction. Nous retenons en particulier les problèmes liés à la transition de l'école à l'emploi et le déclassement des diplômés à l'embauche. Rajouté à cela, le manque d'expérience professionnelle chez les jeunes ainsi que la pénurie d'offres d'emploi suite à la dernière récession économique. Il en découle que les chômeurs, en particulier, ont du mal à s'insérer mais aussi à chercher de manière efficace. Ils se retrouvent donc devant le choix de passer par des structures d'accompagnement aussi bien publiques que privées. Ces structures sont souvent associées à la lenteur de leurs dé-

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10. Source : Insee. Voir en annexe B.2 les détails par catégorie de demandeur d'emploi (5 catégories).

marchés, le manque de diversité dans le public accompagné ainsi que dans les offres d'emploi proposées. Ils peuvent être aussi confrontés à accepter des emplois non qualifiés, inadaptés à leurs formations ou à accepter des contrats atypiques (temporaires). Par ailleurs, ils peuvent choisir de s'engager dans un processus de recherche d'emploi dans l'espoir de décrocher un emploi qui puisse maximiser leur utilité en matière d'attributs monétaires et non monétaires.

Pendant ce temps, certains individus pourvus d'emploi peuvent se retrouver aussi à la recherche d'un nouveau travail. Les raisons qui peuvent pousser ces travailleurs à chercher un emploi s'expliquent principalement par l'inadéquation entre leur emploi actuel et leurs qualifications. Cette non-concordance est principalement le résultat d'une insatisfaction par rapport aux attributs monétaires (salaire) et/ou non monétaires (sécurité de l'emploi, conditions et rythmes de travail, manque de perspectives de carrière dans l'emploi actuel, etc.). Ces demandeurs d'emploi constituent donc un groupe bien spécifique du fait de leur statut, quelquefois plus confortable comparés aux chômeurs.

Cette distinction entre demandeurs d'emploi selon leur statut sur le marché du travail, a déjà fait l'objet de quelques études théoriques et empiriques qui se sont développées à partir des années 90. Principalement, deux lignées de recherche se sont distinguées. La première, soutient la prémisse que les chômeurs et les personnes pourvues d'emploi ne sont pas si différents en ce qui concerne leurs pratiques de recherche d'emploi, formant un groupe homogène de demandeurs d'emploi. Parmi les principaux auteurs de ce courant, nous pouvons citer Van den Berg and Ridder (1998), Burdett and Mortensen (1998), Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007). Ces auteurs concluent que les deux types de demandeurs d'emploi se retrouvent donc en concurrence directe sur le marché du travail. Par conséquent, pour les chômeurs, la présence des personnes qui sont en emploi et qui en recherchent un autre, constitue une contrainte supplémentaire qui réduit leurs chances de trouver un emploi (Eriksson and Gottfries (2005), Rogerson et al. (2005), Eriksson and Lagerström (2006)).

La deuxième lignée de travaux souligne que l'hypothèse selon laquelle ces deux types

de travailleurs sont en directe concurrence sur le marché de travail est discutable, voire même très forte (Longhi and Taylor, 2014). Si ces deux types de demandeurs d'emploi sont en réalité en concurrence pour les mêmes postes d'emploi, cela suppose que leurs caractéristiques soient identiques et que leurs préférences soient similaires. Or, les études récentes montrent que ceci n'est pas le cas puisque les personnes pourvues d'emploi et les chômeurs s'avèrent ne pas avoir les mêmes priorités ni les mêmes préférences. Des auteurs, à l'instar de Weber and Mahringer (2008) ; Lindeboom et al. (1997) ; Gorter et al. (1993), montrent que les demandeurs d'emploi selon qu'ils soient chômeurs ou pourvus d'emploi, mobilisent des modes de recherches différents avec des différentes probabilités de succès. Dans ce sens, nous pouvons réfléchir à l'effet négatif de la dépendance à la durée du chômage sur la probabilité de trouver un emploi mais aussi sur les salaires de réserves. Par ailleurs, la présence de disparités parmi ces demandeurs d'emploi en termes de préférences pour les emplois recherchés rendent les conclusions plutôt mitigées.

Il apparaît donc que la concurrence sur le marché du travail entre demandeurs d'emploi au chômage et ceux en emploi n'est pas suffisamment explorée surtout en ce qui concerne les jeunes demandeurs d'emploi en particulier en France. Il convient donc de bien comprendre l'étape de recherche d'emploi de part ses enjeux économiques, sociaux mais aussi politiques. Pour le cas de la France, il s'agirait même d'une priorité qui ne cesse de préoccuper les débats politiques afin de mettre en place les mesures appropriées pour l'emploi des jeunes. Il devient donc évident de se focaliser sur la question des disparités entre demandeurs d'emploi selon leur statut sur le marché du travail (en termes de stratégies d'intensité de recherche). Afin d'examiner cela, le dernier chapitre de la thèse étudie cette problématique dans le but d'apporter des réponses claires à ce sujet.

## Plan de thèse

Depuis les travaux initiés par Granovetter (1995) et Rees (1966), on sait que les mises en relation entre les employeurs et les salariés se font par des relations, des dispositifs formels ou par des démarches spontanées. Toutefois, peu de recherches distinguent entre le rôle joué par le réseau formé par les contacts personnels (famille, amis, etc.) et celui que joue le réseau formé à l'école. La littérature a accordé très peu d'attention aux connexions qui peuvent exister entre les diplômés et leurs établissements scolaires. Dans un contexte de professionnalisation de l'éducation et de politique de renforcement du rôle de l'école, le rôle de ces établissements de formation dans l'accès à l'emploi devrait clairement être étudié.

Plus précisément, notre analyse s'organise de la manière suivante : le deuxième chapitre, s'intéresse aux modalités d'accès à l'emploi chez les jeunes à travers l'analyse des déterminants de la probabilité d'accès à l'emploi grâce à un mode en particulier. Une comparaison est faite selon le type du mode d'accès utilisé (formel ou informel). Dans le troisième chapitre, un ensemble de mesures d'efficacité de ces différentes méthodes sont proposées et étudiées afin de distinguer le rôle des différents canaux de recherche dans la qualité d'appariement employeur-employé. Enfin, le quatrième chapitre met l'accent sur la stratégie et l'intensité de la recherche d'emploi chez les jeunes qui sont à la recherche d'emploi. Ce dernier chapitre fournit une comparaison entre deux types de demandeurs d'emploi : les chômeurs ainsi que les personnes en emploi à la recherche d'un nouveau travail. L'objectif étant d'étudier l'hypothèse selon laquelle ces deux travailleurs mobilisent des pratiques de recherche d'emploi similaires et se retrouvent donc en concurrence directe sur le marché de l'emploi.

## Chapitre 2 : The Determinants of the Youth Job Access Channel in France

Une fois diplômés, les jeunes commencent à chercher un travail et cette période de prospection conditionne leur accès à l'emploi. Cette étape nécessite la récolte d'un maximum

d'information sur les offres d'emploi ainsi que sur les exigences du marché. L'objectif des demandeurs d'emploi étant de trouver l'offre qui maximise leur utilité en termes de salaire mais aussi en termes d'adéquation par rapport à leurs qualifications. Afin d'arriver à cela, très souvent le recours aux intermédiaires institutionnels est indispensable. Toutefois, dans un contexte d'asymétrie d'information où l'accès à l'information est très coûteux, le candidat peut privilégier le mode informel, à savoir ses propres contacts personnels ou professionnels lors de sa recherche d'emploi. Les réseaux sociaux jouent alors le rôle d'un dispositif d'information supplémentaire sur le marché du travail, comme l'a souligné Rees (1966), et peut être ainsi un moyen efficace de trouver un emploi (voir Pellizzari (2010) et Zenou (2015)).

Une question moins explorée est de savoir si ce mode a la même importance pour des types très différents de demandeurs d'emploi, en particulier une fois que la distinction est faite entre différentes formes de réseaux. Notre analyse distingue entre les réseaux de contacts personnels ou professionnels d'une part, et les réseaux formés à l'école d'autre part. La raison pour laquelle nous considérons deux types de réseaux sociaux est que l'effet de certaines variables, tel que le niveau d'éducation, peut être dilué après le regroupement de ces deux types de réseaux de contacts. Ainsi, nous proposons que ces deux réseaux doivent être étudiés de manière distincte du fait qu'ils puissent être utilisés différemment en fonction des caractéristiques individuelles (âge, genre, origine, l'éducation) et de l'emplacement géographique du lieu de résidence.

En utilisant des données de l'enquête Emploi (Insee, 2010), ce deuxième chapitre se concentre sur les déterminants de la probabilité d'obtenir un emploi à travers un mode de recherche donné (formel ou informel). Autre que l'effet du niveau d'éducation, ce deuxième chapitre s'intéresse aussi à l'impact de la zone de résidence sur les modes de recherche d'emploi, à savoir si l'individu vit dans une zone rurale ou dans une zone urbaine. En France, certaines zones urbaines sont classées comme Zones Urbaines Sensibles<sup>11</sup>. Au-delà

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11. Les Zones Urbaines Sensibles ou ZUS, sont des territoires urbains ou infra-urbains définis par les autorités comme des cibles prioritaires de la politique urbaine en fonction de facteurs locaux liés aux

de Bayer et al. (2008) concernant l'effet du quartier sur l'obtention d'un emploi, nous évaluons les effets socio-spaciaux *i.e.*, en tenant compte du degré de la ruralité et de la sensibilité de leur région de résidence sur le mode d'accès à l'emploi. Par ailleurs, l'impact de l'origine est aussi souligné en considérant 4 types d'origine (en fonction de celle des parents).

Etant donnée la caractéristique qualitative et polytomique de notre variable dépendante (le mode d'accès) ainsi que les caractéristiques de notre échantillon (formé de jeunes actifs en emploi ou chômeurs), notre approche économétrique consiste à estimer un modèle multinomial avec sélection, similaire à Van De Ven and Van Pragg (1981). En effet, du fait que notre analyse est axée sur les jeunes en emploi et en présence des chômeurs dans l'échantillon, la prise en compte du problème de sélection s'avère nécessaire.

Notre analyse empirique montre que plus de 30 % des jeunes travailleurs accèdent à leur emploi grâce à leur réseau social et à leurs établissements scolaires. Par ailleurs, les réseaux scolaires paraissent plus utiles aux jeunes ayant des diplômes élevés, alors que les réseaux sociaux sont plus fructueux pour les très peu diplômés. Par ailleurs, nous montrons que le fait d'être une femme ou avoir des parents non-français réduit significativement la probabilité de trouver un emploi par le biais des réseaux sociaux ou scolaires. Enfin, les personnes vivant dans des Zones Urbaines Sensibles sont plus touchées par le chômage, et ont tendance à trouver un emploi soit par leurs réseaux scolaires soit par les agences publiques d'emploi. Ainsi, les réseaux en général aident les jeunes à trouver un emploi, mais de manière différentes en fonction de leur niveau d'éducation, origine, genre ou lieu de résidence.

Ce deuxième chapitre s'organise comme suit. Section 2 présente les données et certains faits stylisés. Le modèle économétrique est introduit dans la section 3. La section 4 présente les résultats. Enfin, la dernière section conclut.

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difficultés que les habitants de ces territoires connaissent (Source : "Insee - Définitions et méthodes- Zone urbaine sensible")

TABLE 2.18 – The determinants of job finding channels

	Direct applications	Social network	School network	Public agencies	Private agencies	Others
Age	-0.007 ***	0.002 ***	-0.007 ***	0.003 ***	0.001 ***	0.008 ***
Women	0.070 ***	-0.071 ***	-0.007 ***	0.018 ***	-0.011 ***	0.000
In couple	0.016 ***	-0.004 ***	-0.011 ***	0.005 ***	0.001 ***	-0.006 ***
Nationality						
Ref : FR						
FR. 1P FR	-0.020 ***	0.020 ***	0.013 ***	0.005 ***	0.003 ***	-0.020 ***
FR. 2P NFR	0.016 ***	-0.005 ***	-0.001 **	-0.006 ***	0.002 ***	-0.005 ***
NFR	-0.061 ***	0.100 ***	0.008 ***	-0.009 ***	0.007 ***	-0.045 ***
Education level						
Ref : No diploma						
Low	0.009 ***	-0.050 ***	0.023 ***	-0.013 ***	0.002 ***	0.030 ***
Average	0.041 ***	-0.094 ***	0.057 ***	-0.004 ***	0.000	0.001
High 4	-0.026 ***	-0.131 ***	0.067 ***	-0.021 ***	0.014 ***	0.097 ***
Mother's occ.						
Ref : Manual						
Craft	0.015 ***	0.032 ***	-0.032 ***	-0.009 ***	0.002 ***	-0.007 ***
Skilled	-0.015 ***	0.017 ***	0.005 ***	0.000	-0.014 ***	0.007 ***
semi-skilled	0.021 ***	0.008 ***	-0.036 ***	0.009 ***	-0.001 ***	-0.001
unskilled	0.015 ***	0.012 ***	-0.027 ***	0.006 ***	-0.006 ***	-0.001 **
inactive	0.001	0.008 ***	-0.021 ***	0.002 ***	-0.005 ***	0.014 ***
Father's occupation						
Ref : Manual						
Craft	-0.037 ***	0.075 ***	0.001 ***	-0.022 ***	0.000	-0.018 ***
Skilled	0.030 ***	-0.016 ***	0.003 ***	-0.011 ***	0.009 ***	-0.015 ***
semi-skilled	0.012 ***	0.024 ***	-0.012 ***	-0.015 ***	0.003 ***	-0.012 ***
unskilled	0.021 ***	-0.027 ***	0.009 ***	-0.003 ***	0.003 ***	-0.003 ***
inactive	-0.021 ***	-0.035 ***	-0.009 ***	0.022 ***	0.000	0.042 ***

\* Significant at the 10%, \*\* Significant at the 5%, \*\*\* Significant at the 1% level.

Note : The model estimated is a multinomial logit model. Reported estimations are the marginal effects of each variable on the probability of finding a job through a particular job search channel. Weighted estimates. The student test (z-values) for the interaction variables is not reported here as the average marginal effects were computed by authors after estimating the probability of being in each alternative. However, we report the student test of interaction variables in the Appendix (Table B.4 and B.5 with the coefficient estimates).

Table 4 (continued)

	Direct applications	Social network	School network	Public agencies	Private agencies	Others
<b>Live in rural area</b>	0.027 ***	-0.008 ***	-0.004 ***	-0.002 ***	-0.005 ***	-0.009 ***
<b>Region/RUR</b>						
<i>ref : Urban area in low rural region</i>						
Rur/inlow	0.035 ***	-0.028 ***	-0.085 ***	0.014 ***	-0.002 ***	-0.012 ***
Urban/inAverag	0.002 ***	-0.043 ***	-0.094 ***	0.013 ***	0.032 ***	0.014 ***
Rur/inAverag	0.027 ***	-0.024 ***	-0.101 ***	-0.007 ***	0.013 ***	0.016 ***
Urban/inHigh	0.006 ***	-0.044 ***	-0.098 ***	0.013 ***	0.033 ***	0.013 ***
Rur/inHigh	0.014 ***	-0.048 ***	-0.075 ***	0.008 ***	0.032 ***	-0.007 ***
<b>Live in SU Zone</b>	-0.013 ***	-0.023 ***	-0.009 ***	0.013 ***	0.007 ***	0.007 ***
<b>Region / SUZ</b>						
<i>ref : Not SUZ in Paris region</i>						
SUZ/inParis	-0.028 ***	-0.021 ***	0.036 ***	0.011 ***	-0.004 ***	0.006 ***
NoSUZ/inAverag	-0.003 ***	0.013 ***	-0.002 ***	0.017 ***	-0.006 ***	-0.019 ***
SUZ/inAverag	-0.034 ***	-0.014 ***	-0.028 ***	0.022 ***	0.047 ***	0.007 ***
NoSUZ/infew	0.023 ***	0.015 ***	0.008 ***	0.016 ***	-0.030 ***	-0.032 ***
SUZ/infew	0.018 ***	-0.010 ***	0.022 ***	0.032 ***	-0.028 ***	-0.034 ***
<b>gen_resid</b>	22.69	0.701 ***	19.55	1.630 ***	35.67	-0.3
N			33384			
Log likelihood			-43659.217			
$\chi^2(160)$			3231.7			

\* Significant at the 10%, \*\* Significant at the 5%, \*\*\* Significant at the 1% level.

Note : The model estimated is a multinomial logit model. Reported estimations are the marginal effects of each variable on the probability of finding a job through a particular job search channel. Weighted estimates. The student test (z-values) for the interaction variables is not reported here as the average marginal effects were computed by authors after estimating the probability of being in each alternative. However, we report the student test of interaction variables in the Appendix (Table B.4 and B.5 with the coefficient estimates).

Note : SUZ means Sensitive Urban Zone. For example If we look at the effect of the interaction term between the subgroups of regions and the dummy Sensitive Urban Zone, we can read that people living in a SUZ in the subgroup of regions characterized by a high number of SU-Zones are 3.4% less likely to find a job through direct applications.



### Chapitre 3 : Young workers-job matching quality : Evidence from France

Selon Granovetter (1995), la probabilité de réaliser de bonnes performances sur le marché du travail dépend des choix des méthodes de recherche du côté du demandeur d'emploi et des choix des canaux de recrutement du côté de l'employeur. Le deuxième chapitre précédent aborde d'une manière très détaillée les déterminants de la probabilité d'accéder à un emploi grâce aux différents modes d'accès disponibles sur le marché. Une fois l'emploi est obtenu, se pose alors la question de la qualité et de la satisfaction des travailleurs. Dans une logique de continuité, ce chapitre analyse le rôle de ces canaux de recherche sur la qualité de l'appariement jeunes travailleurs-emploi. Afin de décrire cette qualité, un ensemble d'indicateurs objectifs et subjectifs sont proposés.

Il existe une large littérature empirique qui s'est concentrée sur l'estimation des effets des modes d'accès à l'emploi sur le salaire. Toutefois, on connaît très peu quand il s'agit des effets de ces méthodes sur les attributs à la fois monétaires et non monétaires des emplois qu'ils fournissent. Les attributs monétaires concernent les revenus reçus, tandis que les attributs non-monétaires concernent le contrat, l'ancienneté dans l'emploi mais surtout le niveau de satisfaction vis à vis de certaines caractéristiques du travail obtenu (la sécurité de l'emploi, l'adéquation avec ses qualifications, les conditions de travail, le rythme horaire..).

Dès lors, ce chapitre examine ce "sujet important sur lequel nous savons très peu" (Granovetter, 1995). Principalement, dans le cadre de cette analyse, nous essayons de répondre aux questions suivantes : Quels facteurs influencent la probabilité d'être insatisfait au travail ? Quand est-ce que les canaux formels et informels ont un avantage par rapport aux attributs monétaires et non monétaires ? Ainsi, dans quelle mesure ces deux mécanismes (formels et informels) affectent différemment la qualité de emploi ?

En particulier, il s'agit de savoir si l'hypothèse souvent défendue concernant l'effet positif des réseaux personnels sur la probabilité de trouver des emplois qui perdurent, tient toujours si l'on distingue entre réseaux sociaux et réseaux scolaires et si nous concentrons

notre attention sur l'emploi des jeunes ?

Pourquoi ces questions sont-elles importantes ? Quand on sait à la lumière des chiffres cités précédemment que parmi les jeunes qui réussissent à s'insérer, une part importante se retrouve confrontée à des emplois précaires, alors la qualité de l'emploi des jeunes doit être étudiée. Dans ce sens, le chapitre précédent montre que l'accès à l'emploi est très difficile pour la plus part des jeunes très peu diplômés. Toutefois, plus le niveau d'éducation est élevé plus cette probabilité augmente. Les résultats précédents montrent aussi des disparités en matière d'accès à l'emploi selon que le candidat est homme ou femme, Français ou pas, etc. Il apparait aussi que les modes informels (réseaux et candidatures spontanées) sont aussi les plus performants en matière d'accès à l'emploi.

Il serait donc intéressant de comprendre comment ces mêmes canaux qui ont permis l'accès à l'emploi, affectent les différents attributs de l'emploi. Etudier donc l'efficacité des modes de recherche dans l'allocation des ressources humaines est un élément clé pour l'évaluation ainsi que la conception de politiques axées sur le marché du travail des jeunes. Parmi ces politiques, beaucoup visent à offrir des possibilités de travail temporaires (et souvent subventionnés). Ces politiques visent l'insertion des jeunes de telle sorte que l'objectif le plus important soit le travail en soi. Or, il existe aussi des facteurs intrinèques à prendre en compte. Dans ce sens, il est vrai que les compétences se développent et s'améliorent grâce aux expériences professionnelles. Ainsi, le succès de ces politiques dépend de leur capacité à équilibrer insertion professionnelles et qualité de l'emploi.

En d'autre manière, trouver un emploi est une réussite en soi, en particulier dans un contexte de récession économique et de périodes de chômage élevés. Toutefois, la question de la qualité de l'appariement jeunes travailleurs-emploi doit clairement être mise en évidence. Par ailleurs, l'accent sur la qualité de l'emploi a également été dictée par le constat selon lequel l'amélioration de la qualité de l'emploi a des effets positifs sur la croissance et la productivité (European Commission (2003), p. 6-8). Dans le même sens, elle contribue également à l'amélioration du bien-être mental et psychique des employés, servant ainsi comme une condition préalable pour permettre aux travailleurs d'être plus productifs et

plus satisfaits dans leur emploi (Eurofound (2001), p. 7).

Ce chapitre s'organise comme suit. Section 2 se focalise sur les principales contributions théoriques et empiriques autour des effets des méthodes de recherche sur la qualité de l'emploi qu'ils génèrent. La section 3 décrit les données et l'ensemble des variables utilisées dans la spécification économétrique. Section 4 introduit l'approche économétrique utilisée. Section 5 résume les principaux résultats et discute de les implications en termes de recherche future. Enfin, la dernière section conclut.

TABLE 2.19 – Reasons for dissatisfaction with the current job

Ref. Job security	Skills mismatch	Work.hours	Work.condit	Salary	Distance
Women no child (ref. Men no child)	0.047	0.281**	0.383***	-0.231***	0.003
	0.78	2.22	2.94	-2.95	0.04
Women & child (ref. Men no child)	-0.134	0.499***	0.173	-0.320***	0.012
	-1.42	3.07	1.02	-2.77	0.09
Men & child (ref. Men no child)	-0.189*	0.142	0.186	-0.217*	-0.280*
	-1.90	0.82	1.15	-1.78	-2.00
Low education (ref. no diploma)	0.133*	-0.086	-0.022	0.104	-0.175
	1.70	-0.60	-0.16	1.08	-1.65
Average education (ref. no diploma)	0.100	-0.296	-0.172	-0.028	-0.293**
	0.95	-1.53	-0.89	-0.22	-2.07
High education (ref. no diploma)	0.304**	-0.553**	-0.174	-0.114	-0.328**
	2.42	-2.55	-0.84	-0.80	-2.13
Fixed contract(ref. permanent)	-0.504***	-0.865***	-1.167***	-0.797***	-0.652***
	-4.44	-5.82	-6.61	-7.22	-5.85
Temporary contract (ref. permanent)	-0.376**	-1.192**	-0.734**	-0.880***	-0.568**
	-2.05	-2.77	-2.36	-3.72	-2.55
Social Networks (ref. direct application)	0.730***	0.763***	0.609***	0.614***	0.522***
	7.07	5.68	4.52	5.51	4.62
School Networks (ref. direct application)	0.991***	0.836**	1.093***	1.095***	1.149***
	5.03	2.28	3.69	4.34	5.01
Job centers (ref. direct application)	0.968***	1.070***	0.962***	0.820***	0.788***
	6.63	6.20	5.43	5.75	5.46
Other (ref. direct application)	0.380**	0.485*	0.375	0.747***	0.786***
	2.36	1.92	1.46	3.63	3.82
<b>Entry &gt; 2008</b> (ref. entry before 2008)	2.579***	2.240***	2.145***	1.985***	2.002***
	14.04	10.51	9.93	15.64	13.50
<b>Job tenure</b> (in months)	0.061***	0.050***	0.053***	0.046***	0.047***
	15.43	11.22	12.40	18.05	15.36
Observations	5320				

Notes : Reported results are coefficient estimates. Z values are reported under each coefficient. We also control for the industry type (10 options), a dummy for being non French, living with partner, team manager, and living in urban areas.

Source : Enquête Emploi Insee 2010 (author calculation). Unweighted estimates.

TABLE 2.21 – Wage and Job Tenure Regressions

	Job Tenure		Wage	
Age	5,695***	92.42	-	-
<b>Gender and Children</b>				
Men with children	2,514***	5.90	-0,043***	-2.61
Women without children	-6,720***	-16.91	-0,075***	-3.17
Women and children	-4,593***	-9.38	-0,198***	-10.07
<b>With partner</b> (Ref.No)	2,023***	4.87	0,069***	7.03
<b>Non French</b> (Ref.French)	-4,187***	-5.99	-0,066***	-3.61
<b>Urban</b> (Ref.Rural)	-3,082***	-10.35	-	-
<b>Education level (Ref.No diploma)</b>				
Low	-7,548***	-15.88	0,109***	7.74
Average	-13,836***	-24.55	0,314***	8.44
High	-22,777***	-41.41	0,497***	12.47
<b>Access channel (Ref.Direct applications)</b>				
Social Networks	0.05***	2.88	-0,004***	-3.42
School Networks	0,057***	4.28	-0,004***	-4.85
Job centers	0,197***	13.45	-0,014***	-37.09
Others	-0,023**	1.26	-0,003*	-2.26
<b>Previous situation (Ref.Inactive)</b>				
Unemployed	-21,125***	-64.49	0,169**	2.47
Employed	-18,191***	-65.10	0,218***	3.71
<b>Public Sector</b> (Ref.Private)	1,853***	6.37	-0,007	-0.58
<b>Working experience</b> (in years)	-	-	0,010	0.48
<b>Managment responsibility</b> (Ref.No)	-	-	0,180***	16.04
<b>Part-time</b>			-0.552***	-722.98
<b>Access after 2008</b>	-	-	-0,044***	-3.22
<b>Tenure</b> (in months)	-	-	0,007**	2.27
Mills	0.486***	6.01	-0.033**	-2.27
Observations	12560		12560	
R2	0.40		0.36	
Log likelihood	-89902.253		-89902.253	
Wald $\chi^2(253)$	915915.67		915915.67	

Both regressions are 3SLS with selection of respectively the monthly wage and the job tenure (in months). Student statistics are reported. Additional control variables for wage are the industry type (10) and the region of residence (22). Instruments for tenure are age and living in an urban area.

Source : Labor survey, Insee (2010), author calculation.

TABLE 2.20 – The determinants of the contract type

	Fixed contract		Temporary contract	
Men with children	-0.000	-0.00	-0.492***	-2.72
Women without children	0.234***	7.01	0.111	2.27
Women with children	0.157***	2.98	-0.101	-0.75
With partner	-0.207***	-5.84	-0.263***	-4.63
Non French	0.112**	2.15	-0.184*	-1.87
Urban	0.017	0.45	-0.116**	-2.32
<b>Education level (Ref.No diploma)</b>				
Low	-0.001	-0.01	-0.895***	-15.51
Average	-0.484***	-8.58	-2.001***	-23.53
High	-0.341***	-5.80	-2.714***	-27.94
<b>Anterior situation (Ref.Student)</b>				
Unemployed	0.367***	10.16	-0.396***	-6.83
Employed	-0.280***	-8.17	-0.589***	-11.33
<b>Access channel(Ref.direct applications)</b>				
Social Networks	-0.194***	-4.56	-0.487***	-9.28
School Networks	-0.020	-0.27	0.447***	6.01
Job centers	0.042	0.69	-0.742***	-7.26
Others	0.267***	3.60	-0.663***	-5.18
<b>Entry&gt;2008</b>	1.277***	39.53	1.030***	19.56
<b>Exeperience</b>	-0.120***	-18.96	-0.418***	-38.83
Observations	33384			
Log likelihood	-58179.477			
Wald $\chi^2(182)$	12222.59			

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Note :Reported results are coefficient of each explanatory variable's effect on the contract type. Z values are reported next to each coefficient.

Source : Enquête Emploi Insee 2010. Observations unweighted.

## Chapitre 4 : Who Uses What ? Employed and Unemployed Job Search Strategies : Evidence from France

Les études portant sur le processus de recherche d'emploi dans une perspective sociologique, supposent que les individus peuvent influencer leurs probabilités d'obtenir un emploi en menant des activités de recherche fréquentes. Dans cette perspective, on évoque en général "l'intensité" de la recherche d'emploi. Généralement, le comportement des chercheurs d'emploi est modélisé par l'effort de ces derniers durant la période de prospection. Il existe différentes méthodes pour mesurer l'intensité de recherche d'emploi. Certains auteurs considèrent comme indicateurs, le temps consacré à la recherche ou le nombre de contacts par période (Krueger and Mueller, 2008). D'autres, proposent comme indicateur de cette intensité, le nombre de méthodes de recherche utilisées (Devine and Kiefer, 1993). Toutefois, une limite à l'utilisation de l'intensité comme indicateur dans l'étude du processus de recherche d'emploi, est l'absence d'une définition empirique formelle de cette mesure.

Ainsi, ce dernier chapitre de la thèse propose d'utiliser le nombre des méthodes de prospection utilisées comme mesure de l'intensité de la recherche d'emploi. Très peu d'études considèrent cette variable comme mesure de l'intensité. Sabatier (2002) considère comme indicateur de l'effort de recherche, le nombre des méthodes mobilisées. L'auteur montre que le taux d'arrivée des offres d'emploi dépend positivement de l'intensité de cet effort mais aussi de la combinaison de plusieurs méthodes de recherche d'emploi.

Néanmoins, Bortnick and Ports (1992) montrent que le nombre des méthodes utilisées par les demandeurs d'emploi semble avoir relativement peu d'effet sur la probabilité de trouver un emploi. Ces auteurs constatent que c'est plutôt le choix des méthodes de recherche d'emploi qui importe plus que leur quantité. Ainsi par exemple, Blau and Robins (1990) soulignent qu'aux états-Unis, les réseaux sociaux forment le mode de recherche le plus efficace pour les demandeurs d'emploi. Bortnick and Ports (1992), à leur tour, soulignent que l'utilisation des agences publiques de recherche d'emploi (seules ou avec une

autre méthode) offre les probabilités les plus faibles d'être employé à la période suivante.

Le choix de l'intensité de recherche d'emploi, n'est autre que le résultat d'une procédure dépendante des caractéristiques individuelles, socio-démographiques mais aussi du statut du demandeur d'emploi sur le marché du travail. Ainsi, l'étude des caractéristiques qui influencent directement l'intensité de la recherche d'emploi, devrait fournir plus d'informations sur les stratégies choisies par les jeunes demandeurs d'emploi (qu'ils soient chômeurs ou en emploi) afin de quitter ce statut. Cependant, ce seul paramètre ne suffit pas à caractériser le comportement de recherche d'emploi. Il est donc important d'étudier aussi le choix de la stratégie d'emploi et d'examiner les préférences, à la fois des chômeurs mais aussi des demandeurs en emploi. Cette distinction est nécessaire dans la mesure où il est important de discuter l'hypothèse selon laquelle ces deux types de demandeurs d'emploi se retrouvent en directe concurrence sur le marché du travail.

Pour conclure, l'analyse de l'intensité de la recherche d'emploi montre que les effets tournent autour de deux résultats majeurs. Premièrement, on distingue les demandeurs d'emploi qui ciblent leur intensité de recherche en se concentrant sur des canaux spécifiques et en mobilisant au plus le troisième niveau d'intensité (4 canaux au plus). Parmi ceux qui choisissent cette stratégie, nous retrouvons les plus jeunes et les chômeurs ainsi que les moins diplômés, les femmes, vivant en couple et avec des enfants à leur charge. Cette catégorie a plus tendance à inclure les chercheurs d'emploi de longue durée et ceux qui vivent dans des zones rurales. Deuxièmement, il y a ceux qui choisissent stratégie de recherche d'emploi plus intense en diversifiant les canaux utilisés. Ce groupe comporte les personnes en emploi, les moins jeunes et les plus diplômés. Ces derniers ont besoin de rentabiliser leur investissement en éducation et ont intérêt donc à trouver un emploi rapidement. Pour cela, ils maximisent leur visibilité à la fois sur le marché du placement mais aussi au niveau de leurs réseaux de contacts personnels ou professionnels et choisissent donc l'intensité maximale de recherche d'emploi.

Cette contribution académique constitue une première approche qui étudie l'employabi-



lité des jeunes en France en mettant en évidence l'influence de leurs méthodes de recherche d'emploi, qu'elles soient formelles ou informelles, sur l'accès à l'emploi ainsi que la qualité de ce dernier. Par conséquent la revue de littérature dans le chapitre qui suit leur est entièrement consacré.

TABLE 2.23 – The choice of search intensity (marginal effects)

Intensity	level 0	level 1	level 2	level 3	level 4	level 5
Age	-.002*** -3.22	-.030*** -3.45	-.013*** -3.44	-.004*** -3.38	.006*** 3.43	.043*** 3.45
Women	.001** 2.06	.008 1.58	.003 1.16	.000 0.14	-.002** -2.10	-.009 -1.25
Children	.002*** 2.79	.020** 2.57	.007** 2.19	.001 1.05	-.005*** -2.97	-.025** -2.28
With partner	.001*** 2.72	.017*** 2.86	.007*** 2.85	.002*** 2.81	-.004*** -2.84	-.024*** -2.86
Low education (Ref. No diploma)	-.003*** -5.40	-.041*** -6.42	-.016*** -6.10	-.004*** -4.58	.010*** 6.61	.054*** 6.20
Average education (Ref. No diploma)	-.006*** -7.58	-.095*** -12.28	-.044*** -10.22	-.019*** -7.01	.017*** 14.25	.146*** 10.49
High education (Ref. No diploma)	-.006*** -7.89	-.114*** -15.34	-.056*** -12.70	-.028*** -8.90	.016*** 13.80	.188*** 12.90
Registered as JS (yes)	-.003*** -6.39	-.048*** -8.92	-.020*** -8.84	-.007*** -7.96	.010*** 8.54	.068*** 8.99
Unemploy benefit (yes)	-.003*** -4.66	-.039*** -5.41	-.016*** -5.40	-.005*** -5.22	.008*** 5.30	.055*** 5.43
<b>Employed JS (Ref. Unemployed)</b>	-.010*** -8.05	-.128*** -17.50	-.044*** -19.72	-.006 -5.94	.033*** 14.59	.155*** 20.69
Average search (Ref. short)	-.000 -0.38	-.002 -0.38	-.001 -0.38	-.000 -0.38	.000 0.38	.004 0.38
Long search (Ref. short)	.001*** 3.58	.022*** 3.88	.009*** 3.88	.003*** 3.79	-.005*** -3.84	-.031*** "-3.90
Observations	11,274					

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Notes : Reported results are the marginal effects (z-values are reported bellow each) after estimating an ordered probit model. Additional control variables are : nationality, the region of residence (22), living in urban (if not rural) area, occupation status at the current job (for employed) at the previous job (for unemployed) the parents' occupation (7 options).

Source : Enquête Emploi 2010, author's calculations.

TABLE 2.22 – Determinants of on-the-job search

	Model 1		Model 2		Model 3	
Men with children	-0,084	-0,650	-0,025	-0,330	-0,019	-0,250
Women without children	-0,117	-1,470	0,047	0,890	-0,042	-0,880
Women with children	-0,065	-0,560	0,093	1,240	-0,068	-0,960
Urban (Ref.rural)	-0,216**	-2,580	-0,019	-0,380	-0,038	-0,730
With partner (Ref.single)	-0,032	-0,460	-0,014	-0,300	0,038	0,890
Non French (Ref.French)	-0,242*	-1,840	-0,207**	-2,500	-0,274***	-3,270
Low education (Ref.no diploma)	0,307***	3,680	0,155***	3,040	0,185***	3,650
Average education (Ref.no diploma)	0,375***	3,270	0,154**	2,060	0,280***	4,480
High education (Ref.no diploma)	0,657***	4,910	0,283***	3,120	0,477***	7,640
Fixed-term contract (Ref.permanent)	0,192**	2,250	0,299***	4,82	0,267***	5,290
Temporary job (Ref.permanent)	0,303*	1,910	-0,099	-0,74	-0,265***	-2,930
Public sector (Ref.private)	-0,142	-1,440	-0,088	-1,500	-0,080	-1,340
Tenure (in months)			-0,005***	-4,82	-0,006***	-4,78
Wage/lnwage	0,000	0,050	0,271	1,440	-0,413***	-10,170
Social net (Ref.direct app.)	-0,091	-1,190	0,053	1,230	0,047	1,060
School net (Ref.direct app.)	-0,209		-0,306***	-3,290	-0,311	-3,260
Public agencies (Ref.direct app.)	0,158	1,150	0,209***	3,230	0,186***	2,810
Private agencies (Ref.direct app.)	0,211	0,990	0,262**	2,200	0,359***	3,030
Other channels (Ref.direct app.)	-0,137	-0,870	-0,106	-1,210	-0,082	-0,920
Entry after crisis (Ref.before 2008)	0,163**	2,220	0,139***	2,950	0,085*	1,930
$\rho_{wage}$			-0,171	-1,67	-	-
Observation	33,335		11,175		11,175	
Log-likelihood	-50264,815		-8044,0195		-2688,9328	
$\chi^2$	12187.76		280.30		397.73	
Degree of Freedom	294		49		50	
Wald test of wage exogeneity			$\chi^2(1)= 2.80$		-1.67	

\*Significant at 10% ; \*\* at 5% and \*\*\* at 1%

Model 1 is CMP. Model 2 is IVPROBIT. Model 3 is a Probit.

Note :Reported results are coefficient of each explanatory variable's effect on the probability of being on-the-job searcher. Z values are reported next to each coefficient. Additional explanatory variables are the function type (10 alternatives) and the region of residence (22 regions).

Source : Enquête Emploi 2010, author's calculations. Weighted statistics.

### **Encadré 1 : L'approche de Roodman pour les modèles récurrents mixtes/Conditional Mixed Process**

Parmi les méthodologies économétriques utilisées dans cette thèse, nous faisons appel aux systèmes d'équations simultanées. Notre système d'équations simultanées est récursif. Dans ce cas particulier de système d'équations avec variables dépendantes qualitatives, nous ne pouvons plus utiliser les techniques d'estimation standard (2SLS, 3SLS) puisque notre but est de trouver des probabilités conditionnelles plutôt que des relations linéaires.

Amemiya (1978) a déjà établi certaines propriétés de l'estimateur en deux étapes dans le cas de deux équations avec une variable endogène entrant dans la deuxième équation comme exogène. Greene (2003) a également suggéré cette estimation en deux étapes comme estimateur efficace. Roodman (2011) généralise cette procédure d'estimation en deux étapes pour le cas où un grand nombre de variables endogènes ne sont pas toutes quantitatives. Le modèle doit être alors récursif pour permettre l'estimation.

Le modèle structurel est ainsi estimé par la technique d'estimation développée par Roodman (2011) qui présente un avantage supplémentaire puisqu'elle permet de résoudre des cas inévitables de variables endogènes qualitatives parmi les variables explicatives.

La commande "cmp" a été suggérée par Roodman (2011) sous Stata afin d'estimer les modèles mixtes à processus récursif.

"Mixed Process" signifie que les différentes équations peuvent avoir différents types de variables dépendantes (types de réponse). Les modèles disponibles sont : les modèles classiques de régression linéaire, Tobit, Intervalle Censuré, Probit, Probit Ordonné, le Probit Multinomial, etc.

Il convient également de noter que le CMP est basé sur le maximum de vraisemblance (utilisant une méthode de simulation) et par conséquent il partage tous les avantages associés à l'estimation ML. En outre, l'approche CMP a l'avantage d'être asymptotiquement plus efficace que toutes les autres méthodes d'estimation (Roodman, 2011).

## **Conclusion**

"Employabilité des jeunes en France : L'influence des réseaux et des canaux formels de recherche d'emploi"

Cette thèse aborde trois grands axes : La recherche, l'accès et la qualité de l'emploi des jeunes. L'objectif principal est de mettre en évidence l'influence des modes de recherche,

et plus particulièrement des réseaux, sur l'employabilité des jeunes en France. Il s'agit de comparer la performance des réseaux (mode informel) à celle des canaux institutionnels (modes formels) sur le marché du travail. Afin d'examiner cela, les réseaux sociaux ont été divisés en deux types de réseaux : le réseau social ou professionnel et le réseau scolaire. Dans un contexte de renforcement du rôle joué par les établissements de formation et de la professionnalisation de l'éducation, , il semble opportun d'étudier plus en profondeur le réseau formé à l'école, afin de mettre en lumière son efficacité sur l'embauche.

Comme nous l'avons formulé dans le premier chapitre, cette thèse s'inscrit donc dans la continuité d'une littérature déjà existante portant sur les canaux formels et informels de recherche d'emploi. Elle vise notamment à mettre en évidence les différences entre ces deux mécanismes en prenant en considération non seulement les déterminants de leurs probabilités de fournir aux jeunes l'accès à l'emploi mais aussi leur influence sur la qualité du travail obtenu. Afin d'examiner cela, cette thèse utilise une approche empirique en se basant sur des données représentatives des jeunes travailleurs en France.

Dans le deuxième chapitre, nous avons abordé les différents problèmes rencontrés par les jeunes lors de l'étape de la recherche d'emploi. Nous nous sommes, par la suite, focalisé sur les difficultés engendrées par le genre, le lieu de résidence, la nationalité et le niveau de diplôme. Nos données, extraites de l'enquête Emploi de l'Insee (2010) montrent qu'en France il y a 65% d'actifs peu diplômés tandis que seulement 35% des jeunes actifs possèdent un diplôme de l'enseignement supérieur ( $\geq$  Bac+2). Les demandeurs d'emploi les plus diplômés sont confrontés à un phénomène que la littérature appelle "sur-offre" de diplôme. Généralement, le diplôme en tant que signal de capacités extrinsèques et intrinsèques, garantit une certaine protection contre le chômage. Mais lorsque les travailleurs diplômés se retrouvent sur un marché du travail de plus en plus rétréci, leurs diplômes n'assurent plus ce rôle correctement. Cependant, durant leur formation, ils ont pu se constituer un réseau. Nous suggérons que les réseaux peuvent jouer un rôle important qui permet à ses utilisateurs non seulement de se distinguer mais aussi de bénéficier d'un accompagnement différent de celui des intermédiaires de recrutement publics ou privés.

C'est ainsi que ce deuxième chapitre de la thèse contribue au débat sur l'accès des jeunes à l'emploi en considérant le rôle des canaux de recherche d'emploi comme intermédiaires de recrutement. Nous estimons un modèle Logit Multinomiale où la variable dépendante est le mode d'accès à l'emploi. Afin de tenir compte du biais de sélection en raison de la présence de jeunes chômeurs dans notre échantillon, nous adoptons une approche d'estimation à deux étapes similaire à celle de Van De Ven and Van Praag (1981). La première étape consiste à estimer la probabilité d'être en emploi plutôt qu'au chômage (équation de sélection). Par la suite, la deuxième étape consiste à estimer la probabilité d'obtenir un emploi à travers un mode d'accès bien déterminé.

A travers cette analyse nous avons pu mettre en évidence l'influence des caractéristiques individuelles ainsi que l'environnement socio-spatial des jeunes chercheurs d'emploi sur leur probabilité d'être employé.

Principalement, les résultats de ce premier travail empirique suggèrent que la distinction entre deux types de réseaux a permis de montrer que ce mode informel importe différemment en fonction des caractéristiques individuelles socio-démographiques ou socio-spatiales. C'est ainsi que la tendance chez les plus diplômés est de s'insérer en faisant appel au mode informel, soit à travers les réseaux scolaires ou bien en envoyant des candidatures spontanées. En ce qui concerne les peu ou non diplômés, le recours aux réseaux de contacts personnels ou professionnels ainsi qu'aux intermédiaires publics d'emploi est le plus utile afin d'obtenir un travail. Ces résultats vont de pair avec les constatations de Kramarz and Skans (2014) selon lesquelles les liens faibles aident les gens avec des qualifications plus élevées.

Une deuxième série de résultats concerne les caractéristiques socio-spatiales. Les personnes vivant dans une ZUS sont plus susceptibles de trouver un emploi par le biais des réseaux scolaires, des organismes publics ou des concours. Il semblerait donc que lorsque les gens rencontrent des difficultés à trouver un emploi par le biais des canaux informels (candidatures directes, réseaux sociaux et scolaires), l'Etat peut jouer un rôle important.

Lorsque nous nous concentrons sur les caractéristiques géographiques du lieu de rési-

dence, nous constatons un effet plus élevé des réseaux sociaux et scolaires dans les zones urbaines. A l'inverse, les autres canaux formels sont plus fréquemment utilisés dans les zones rurales pour trouver un emploi. Cet effet des réseaux scolaires est d'autant plus important pour les Franciliens ne vivant pas dans les zones ZUS. Cela peut également être expliqué par une forte concentration des établissements scolaires dans l'agglomération économique polycentrique de la région Ile de France (Paris).

Après avoir mis en évidence la pertinence des réseaux scolaires pour les plus jeunes et les plus diplômés ainsi que l'importance des intermédiaires publics pour les moins qualifiés, le troisième chapitre de la thèse, vise à fournir des indicateurs d'efficacité pour ces canaux. Ces indicateurs peuvent être objectifs et subjectifs. Les indicateurs objectifs définissent la qualité de l'emploi, il s'agit du salaire (monétaire), du type de contrat et de l'ancienneté dans l'entreprise (non-monétaires). Les indicateurs subjectifs sont liés à la satisfaction ou non de l'emploi actuel. Les raisons d'insatisfaction peuvent être liées aux attributs monétaires (insatisfaction à l'égard des salaires) ou non monétaire de l'emploi (insatisfaction à l'égard du rythme horaire, des conditions de travail, de la sécurité de l'emploi et l'inadéquation entre le travail et les qualifications du l'employé).

Dans cette analyse, un intérêt particulier concerne le rôle joué par les canaux de recherche d'emploi, en particulier, la distinction entre les canaux formels (à savoir les deux intermédiaires de l'emploi public et privé) et les canaux informels (réseaux sociaux et scolaires). La question que nous avons posée dans ce chapitre consiste à savoir quand les canaux formels et informels présentent un avantage en termes de qualité d'appariement pour jeune travailleur-emploi ?

Conformément à nos attentes initiales, la distinction entre ces deux types de réseaux a permis de prouver que les deux réseaux sociaux et scolaires affectent différemment les attributs de l'emploi mais aussi la satisfaction du travailleur. Tandis que les réseaux scolaires, comparés aux candidatures directes, semblent offrir des emplois temporaires (probablement comme passerelles vers des emplois permanents), les réseaux sociaux jouent un rôle positif sur la sécurité de l'emploi en générant des emplois plus durables. Malgré cet effet

positif des réseaux sociaux sur la sécurité de l'emploi et sur l'ancienneté, des effets négatifs sont observés sur le salaire mais aussi sur la satisfaction vis à vis d'autres facettes non monétaires des emplois obtenus grâce à ce mode.

Ce troisième chapitre a montré donc qu'au delà du diplôme, l'expérience professionnelle ou les caractéristiques de l'emploi, les modes de d'accès affectent aussi la qualité et la satisfaction de l'emploi. Ceci implique la nécessité d'inciter les jeunes travailleurs à rendre leur stratégie de recherche plus efficace. Dans ce sens, le renforcement du rôle joué par les réseaux scolaires en permettant une transition de l'école à l'emploi plus fluide est nécessaire. Cela servirait non seulement à renforcer l'employabilité des jeunes, à améliorer leur qualité d'appariement sur le marché et à augmenter leur bien-être au travail. L'impact des intermédiaires formels de recrutement n'étant pas encore clair sur des appariements qui endurent, ce travail de recherche souligne que davantage d'efforts restent à faire en termes de politiques publiques afin de rendre ces dispositifs formels plus efficaces et plus réactifs aux besoins des demandeurs d'emploi et aux exigences du marché.

Cela peut être possible en réformant le fonctionnement des intermédiaires publics de recrutement. Ce mode institutionnel apparaît uniquement utile pour les non qualifiés et même s'il permet des emplois plus durables, il génère aussi les emplois les moins payés. Ainsi, il est nécessaire de rendre ce dispositif plus influent en adaptant ses services aux besoins du marché du travail qui changent constamment. Des actions qui vont dans ce sens sont susceptibles d'attirer de nouveaux partenariats avec des entreprises à fort potentiel de croissance et de recrutement ce qui est nécessaires afin de rendre ce mode plus attrayant aussi pour les plus diplômés.

Nous nous sommes uniquement intéressés jusqu'ici qu'aux individus en emploi. Le dernier chapitre de ce travail de thèse est consacré à la comparaison entre le comportement des chômeurs et celui des employés lors d'une recherche d'emploi. Nous essayons, à travers cette étude, de fournir de nouvelles preuves intéressantes quant aux différences de stratégies et de préférences de ces deux types de demandeurs d'emploi.

Pour cela, on étudie dans quelle mesure ces deux types de demandeurs d'emploi ont des



comportements de recherche similaires en termes de : préférences, intensité et stratégies de recherche d'emploi. Autrement dit, nous cherchons à savoir si ces deux types de demandeurs d'emploi sont réellement en concurrence pour les mêmes offres de travail. À ce sujet, la littérature suggère que la présence sur le marché du travail des demandeurs pourvus d'emploi, réduit la probabilité d'accès pour les chômeurs. Certains auteurs prouvent que les deux types de demandeurs d'emploi apparaissent en concurrence pour les mêmes offres d'emploi (Van den Berg and Ridder (1998), Burdett and Mortensen (1998), Rogerson et al. (2005), Eriksson and Gottfries (2005), Eckstein and Van den Berg (2007)). Cependant, il y a un manque de preuves empiriques lorsqu'il s'agit de comparer les travailleurs en emploi et les chômeurs qui sont à la recherche d'un travail. Nos résultats montrent des différences significatives dans les caractéristiques de ces deux types de demandeurs d'emploi.

Nos résultats réfutent l'idée selon laquelle ces deux types de demandeurs d'emploi sont en concurrence directe pour les mêmes offres d'emploi. Nous trouvons des différences systématiques entre eux en termes de caractéristiques individuelles ou de préférences à l'égard du type de travail recherché, d'intensité et stratégies de recherche d'emploi. Ainsi, les demandeurs d'emploi au chômage ont plus tendance à postuler à des emplois précaires comparés aux demandeurs d'emploi en possédant déjà un<sup>12</sup>. Nos résultats empiriques soulignent le fait que les employés qui sont à la recherche d'emploi le sont car ils sont pourvus d'emploi précaires ou moins satisfaisants.

En ce qui concerne le niveau de l'éducation, nous avons montré que moins le niveau d'éducation de l'employé est élevé, plus la probabilité d'être à la recherche d'un autre emploi l'est aussi. Nos résultats montrent que, chercher en emploi plutôt qu'au chômage est associé à une probabilité plus élevée de préférence pour des emplois à temps plein. Ce résultat est cohérent avec le fait que les chômeurs sont moins exigeants par rapport aux demandeurs en emploi. Il est possible de conclure que les chômeurs et les employés

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12. Selon Kalleberg et al. (2000), l'emploi atypique augmente fortement de l'exposition à de mauvaises caractéristiques de l'emploi net des contrôles pour les travailleurs (caractéristiques personnelles, situation familiale, profession et type d'industrie).

demandeurs d'emploi ont des comportements différents de recherche d'emploi non seulement en termes de préférences pour le type de travail recherché (temps partiel/temps plein), mais aussi en termes d'intensité et de méthodes de recherche.

En effet, nous observons des différences en termes d'intensité de recherche d'emploi (tel que mesurée par le nombre de méthodes de recherche utilisées) selon le statut du demandeur sur le marché du travail. Les demandeurs pourvus d'emploi sont plus susceptibles d'utiliser un plus grand nombre de procédures comparés aux chômeurs. Ainsi, ils adoptent une stratégie de recherche d'emploi plus intensive.

Par conséquent, ces deux types de demandeurs d'emploi affichent également des différences en ce qui concerne le type de canaux de recherche d'emploi utilisés (formel, informel ou combiner les deux). Nous montrons que, par rapport aux chômeurs, les travailleurs en emploi tendent à combiner plusieurs canaux de recherche d'emploi formels et informels en même temps. Cela signifie que ce groupe de demandeurs d'emploi diversifie alors que les chômeurs ciblent les modes de recherche utilisés.

En ce qui concerne les caractéristiques des ménages, nous montrons que la structure du ménage joue un rôle important, en particulier si la question du genre est mise en évidence. La recherche d'emploi devient plus coûteuse pour les femmes car elles sont plus concernées par l'effet négatif d'avoir des enfants à charge, ce qui peut les amener à passer plus de temps à la recherche d'une offre acceptable qui va de pair avec leurs contraintes. Ce résultat est conforme à nos constatations concernant l'effet de la maternité sur les préférences pour les heures de travail. Nos résultats montrent que, pour une femme, le fait d'avoir des enfants engendre une préférence plus faible pour les emplois à temps plein.

Ce résultat implique deux interprétations possibles. La première est que les femmes avec enfants à charge à la recherche d'emploi, peuvent être moins exigeantes en termes de possibilités d'emploi (temps partiel sinon temps plein). La deuxième interprétation est que ce type d'arrangement du temps de travail pourrait être avantageux pour les mères qui travaillent car il leur offre plus de temps libre consacré à leurs responsabilités familiales.

Par ailleurs, les effets marginaux de chaque variable explicative sur le choix de l'intensité

montrent des résultats intéressants concernant principalement les effets de la structure du ménage. Nous suggérons que les contraintes familiales sont très influentes sur l'intensité de la recherche d'emploi et induisent moins d'effort de recherche, même si l'intuition est qu'elles pourraient aussi être une incitation à trouver un emploi plus rapidement afin de subvenir à des besoins nombreux.

À la lumière de nos résultats empiriques, nous suggérons aussi que plus le niveau d'éducation est élevé, plus la probabilité d'utiliser plusieurs méthodes de recherche l'est aussi. La plupart des diplômés ont le sentiment d'avoir accompli un long cursus en investissant dans leur éducation. Ce qui leur donne plus de choix en termes de méthodes de recherche d'emploi et plus d'incitation à intensifier leurs recherches.

En conclusion, nous suggérons que l'existence de disparités dans la recherche d'emploi entre ces deux types de demandeurs, peut être due, non seulement, à leurs différences de préférences pour le type d'emploi recherché, mais aussi à leurs différences de stratégie de recherche. Par conséquent, les demandeurs d'emploi peuvent choisir les mêmes efforts de recherche, tout en choisissant différentes stratégies de recherche d'emploi qui conduirait à différentes probabilités de recevoir une offre d'emploi. Pour nos recherches futures, nous analyserons l'effet de l'intensité de la recherche et des méthodes de recherche utilisées sur la durée du chômage, donc sur la probabilité de sortie du chômage.

Ainsi comme prolongements à ce travail, l'étape suivante devrait faire l'objet d'une étude en données de panel afin de nous permettre de suivre les jeunes sur plus d'une période. En effet, une telle approche nous permettra non seulement de mieux identifier l'effet de la conjoncture sur l'accès à l'emploi chez les jeunes, mais aussi d'utiliser des outils tels qu'un modèle de durée afin de fournir une mesure d'efficacité à ces différentes stratégies de recherche d'emploi (étape post-search). Il serait également possible de comparer les probabilités d'accès à l'emploi chez ces deux types de demandeurs d'emploi et analyser la qualité des appariements générés.

De nombreuses extensions de cette thèse sont possible telle une comparaison entre les réseaux de liens (personnels, professionnels et scolaires) et les réseaux sociaux virtuels sur

Internet tels que LinkedIn, Monster, Viadeo, etc. Cette étude permettrait de voir si les disparités en termes de niveau d'éducation, de genre, d'origine ou de lieu de résidence prouvées dans cette thèse, persisteront toujours sur les réseaux sociaux virtuels ?

Il serait encore intéressant d'analyser plus en profondeur le rôle des réseaux scolaires à travers une base de données plus spécifique et visant des réseaux d'anciens de l'université et d'autres des Grandes Ecoles afin de comparer leurs fonctionnements ainsi que leurs efficacités respectifs.

## **Résumé. Employabilité des Jeunes en France : L'influence des Réseaux et des Canaux Formels de Recherche d'Emploi**

Améliorer l'accès et la qualité de l'emploi des jeunes figure parmi les priorités en France. Ainsi, ce travail doctoral aide à comprendre l'efficacité et les limites des canaux formels et informels. Les trois études empiriques de cette thèse fournissent un état des lieux de l'employabilité des jeunes en mettant l'accent sur les tendances concernant leurs pratiques de recherche et la qualité des emplois qu'ils obtiennent. Ces trois études sont précédées par une introduction générale et une revue de littérature. La première est dédiée à l'analyse des déterminants de l'accès à l'emploi à travers un mode de recherche bien déterminé. Dans le cadre de cette analyse, les effets de certains facteurs tels que l'origine, le genre, le lieu de résidence et l'éducation sont mis en évidence. La deuxième s'interroge sur l'influence des modes d'accès sur la qualité et la satisfaction de l'emploi obtenu. La troisième s'intéresse aux demandeurs d'emploi afin de comprendre leurs préférences et leurs stratégies de prospection. Cette dernière étude de la thèse est dédiée à la comparaison entre les pratiques (en termes d'intensité et de préférences) employées par les individus en emploi et celles menées par les chômeurs. Nos conclusions suggèrent un renforcement du rôle joué par les intermédiaires institutionnels de placement (en particulier le service public) mais aussi la nécessité de renforcer davantage le rôle des établissements scolaires afin de promouvoir le réseau scolaire comme moyen de recrutement.

## **Abstract. Youth employability in France : The Influence of Networks and Formal Job Search Channels**

Improve youth employment's quality is a priority in France. This thesis focuses on job search and job access trends, in addition to the role played by the informal and formal search channels on the job matching issue. It helps understanding the informal and formal channels' efficiency and limitations in order to ameliorate youth employment as France continues to prioritize youth in its national policy agendas. This PhD work offers valuable lessons learned on "who uses what" and on "what works" better for youth employment through three empirical studies. These three studies are preceded by a general introduction and a literature review. The first chapter is dedicated to the analysis of the job access channel's determinants. As part of this chapter, the effects of some factors such as origin, gender, place of residence and education are emphasized. The second chapter examines the influence of these access channels on the quality and the satisfaction with the obtained job. The third chapter focuses on the comparaison of on- and out-of-the job seekers' preferences, search intensity and strategies. Our findings suggest a further strengthening of the role played by the public employment service as well as the role of schools as a possible recruitment channel.