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## Développement des micro-entreprises au Vietnam

Thi Quynh Trang Do

► **To cite this version:**

Thi Quynh Trang Do. Développement des micro-entreprises au Vietnam. Economies et finances. Université Paris-Est, 2010. Français. NNT : 2010PEST3006 . tel-00592223

**HAL Id: tel-00592223**

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UNIVERSITE PARIS EST  
ECOLE DOCTORALE EGEE

## Doctorat

Sciences Economiques

Thi Quynh Trang DO

Titre:

**Développement des micro entreprises au Vietnam**

*Thèse dirigée par: M. le Professeur Gérard DUCHÊNE*

Soutenue le: *09 septembre 2010*

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# Remerciements

Tout d'abord je tiens mes remerciements à mon Directeur de thèse, Professeur Gérard Duchêne, qui m'a initié à la recherche puis a dirigé mes travaux tout en me laissant autonomie et indépendance. Il a su prendre son temps et de son énergie pour m'apprendre tous les aspects du métier de chercheur.

Je remercie très chaleureusement Mme Mathilde Maurel et Mme Thi Anh Dao Tran-Rieber d'avoir accepté la lourde tâche de rapporteur. Je remercie également M. Philippe Adair, M. Alexandre Kolev et M. Marc Lautier d'avoir pris leur temps pour assister à la soutenance de ma thèse.

Pour financer ma thèse, j'ai bénéficié d'une bourse Eiffel de l'EGIDE puis d'un poste d'ATER à l'Université Paris Est - Créteil Val de Marne. J'en remercie donc les représentants.

Finalement, je veux remercier mes collègues, mes amis et particulièrement ma famille pour leur soutien et leur affection tout au long de cette thèse.



# Résumé

Cette thèse étudie le développement des micro entreprises au Vietnam. Nous cherchons d'abord à savoir quels sont les facteurs qui affectent l'offre de travail indépendant sur le marché du travail. En utilisant l'enquête sur le niveau de vie des ménages en 2004 (VHLSS04), enquête dans laquelle les informations sur l'emploi des individus et sur les entreprises familiales sont collectées, nous trouvons qu'un certain nombre de déterminants permettent de décrire le profil des travailleurs indépendants au Vietnam, parmi lesquels la différence de revenu attendu, le niveau d'éducation, l'âge et le secteur d'activité. Dans un deuxième temps, nous tentons d'identifier les déterminants de la performance des micro et petites entreprises. Nos résultats montrent que la hauteur de l'impact de différents caractéristiques des entreprises varie nettement en fonction de leur performance. Parmi ces facteurs, la taille, l'âge et l'emplacement de l'entreprise affectent significativement cette performance. Le troisième chapitre propose une recherche sur l'hétérogénéité des entreprises face à différentes barrières à la croissance. Les données indiquent que le degré de contrainte que les entreprises rencontrent dépend de leurs caractéristiques et de la nature de la barrière. La taille, l'âge, l'emplacement et la branche économique comptent beaucoup dans la détermination du niveau de contrainte.

**Discipline** : Sciences Economiques

**Mot-clés** : Micro entreprises, choix d'occupation, croissance, secteur informel, Vietnam.

# Abstract

This thesis investigates the development of micro enterprises in Vietnam. We seek to know what factors affect the self-employment supply on the labour market. Using data from the survey on household living standards in 2004 (VHLSS04) in which information on employment of individual and household businesses are collected, we find a certain number of determinants explaining the pattern of self-employed in Vietnam : earnings differentials, educational level, age and business sector. In the second chapter, we seek to identify the determinants of micro and small firm performance. Our results show that impact of different factors on firm performance varies significantly across its growth state. Among them, size, age and firm location matters a lot to firm growth. The third chapter aims at analyzing the heterogeneity of firms across different barriers to growth. Our empirical evidence reveals that the level of constraint met by firms depends on the firm characteristics and the nature of barrier to growth. Size, age, location and industrial sector constitute important determinants of constraint level.

**Discipline** : Economics

**keywords** : Micro enterprise, occupational choice, firm growth, informal sector, Vietnam.

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# Liste des abréviations

ACP	: Analyse en composantes principales
ASEAN	: Association
EO	: Entrepreneurial orientation
GDP	: Gross Domestic Product
GNI	: Gross National Income
GSO	: General statistics Office
IIA	: Independant of Irrelevant Alternatives
MCO	: Moindre Carré Ordinaire
MNL	: Multinomial Logit
MSE	: Micro and Small enterprise
OCDE	: Organisation de coopération et de développement économiques
OE	: Orientation Entrepreneuriale
OECD	: Organisation for economic cooperation and development
OLS	: Ordinarie Least Square
PCA	: Principal Component Analysis
PED	: Pays en voie de Développement
PIB	: Produit Intérieur Brut
PME	: Petite et Moyenne Entreprise
R&D	: Recherche et Développement ; : Research and Development
SOEs	: State Owner's Enterprises
VAT	: Value Added Tax
VHLSS	: Vietnam Household Living Standard Survey



# Chapitre 1

## Introduction et Résumé

### 1 Introduction générale

L'idée selon laquelle l'entrepreneuriat et la croissance économique sont intimement liés et se renforcent mutuellement remonte aux travaux de Schumpeter (1911). Schumpeter affirme que la création de nouvelles entreprises constitue un moteur de la croissance économique. Cet effet résulterait de l'expression concrète de la nature de l'entrepreneur (présentée ci-après) et, plus précisément, de sa propension à innover. Schumpeter a décomposé cette activité en cinq composants : "(1) l'introduction d'un nouveau bien ou d'un bien de meilleure qualité, (2) l'introduction d'une nouvelle méthode productive ou commerciale, (3) l'ouverture d'un nouveau marché, (4) la conquête de nouvelles sources de matières ou de biens intermédiaires, (5) la réalisation de nouvelles organisations industrielles (Schumpeter, 1961, p66). Par l'innovation, l'entrepreneur Schumpeterien recherche la création de nouvelles opportunités de profit. Celles-ci peuvent découler d'accroissements de productivité. De plus, l'innovation introduite par l'entrepreneur constitue une source de déséquilibre créative. Alors que certaines entreprises adoptent l'innovation, celles qui sont moins efficaces sont forcées de quitter le marché jusqu'à ce que le nouvel équilibre soit atteint. Dans ce cas, la relation avec la croissance économique apparaît assez clairement.

Pourtant, bien que la contributions de Schumpeter soit fondamentale, son impact sur les politiques publiques semble assez limité. Pendant plusieurs décennies, les politiques



visant la création d'entreprises et en particulier les petites entreprises conçues comme le moteur de la croissance économique, sont restés très limitées. Dans leur ouvrage "Entrepreneurship and economic growth", Audrestch et al. (2006) indiquent que :

*"Only few years earlier the policy debate focusing on growth and employment had looked to the macroeconomic instruments of fiscal and monetary policy on the one hand and the size and scale economies yielded by the large corporation on the other."*

En effet, le rôle de l'entrepreneuriat dans l'économie a été largement sous-estimé pendant la première moitié du 20<sup>ème</sup> siècle. L'importance de l'entrepreneuriat a diminué pendant la période après la Seconde Guerre Mondiale, où le modèle de croissance de Solow (1956) basé sur la fonction de production néoclassique est largement utilisé pour expliquer la croissance économique. Deux principaux facteurs de production, le capital physique et la main d'oeuvre, sont économétriquement utilisés dans le modèle comme les déterminants de la croissance. Dans son modèle, Solow(1956) reconnaît le rôle du progrès de technique dans la croissance économique mais il le considère comme un facteur exogène. De ce fait, une grande partie non expliquée par les deux facteurs de production dans la variation du taux de croissance entre les pays est expliquée par un résidu exogène - la différence de niveau technologique. D'après ce modèle, c'est l'investissement en capital physique qui est la clé de la croissance économique et de la hausse de productivité des travailleurs. En conséquence, la littérature économique et les décideurs se concentrent sur les instruments, à savoir les politiques économiques, qui sont favorables à l'investissement en capital physique, et entraînent par la suite la croissance économique. Au niveau des implications microéconomiques, ce modèle de croissance engendre des débats sur l'organisation des entreprises et du marché. Les arguments théoriques suggèrent que l'utilisation du capital physique est plus efficace dans les grandes entreprises susceptibles d'exploiter des économies d'échelle. L'exploitation des économies d'échelle quant à elle, entraîne la concentration du marché et des situations d'oligopole, avec un petit nombre de producteurs sur le marché. Il n'y a donc plus de rôle de l'entrepreneuriat dans ce cas.

Les travaux empiriques<sup>1</sup> affirment l'efficacité des économies d'échelle dans la promotion de la croissance économique. Par conséquent, sous l'influence du modèle de croissance de Solow, le rôle de l'entrepreneuriat dans la croissance économique est rabaisé aux yeux des autorités et de nombreux économistes. De fait, pendant la période de l'après Guerre, le nombre des entrepreneurs a diminué dans plusieurs pays développés du monde (Audrestch et al., 2006).

Comme nous l'avons présenté ci-dessus, une part importante de la différence de taux de croissance entre les pays est expliquée dans le modèle de Solow par l'écart du progrès technologique qui est considéré comme un facteur exogène. Dans le modèle de croissance de Romer (1986), ce facteur est introduit comme une variable endogène. Cependant, l'entrepreneuriat et les petites entreprises sont ici encore considérés comme moins avantageux, comme dans le modèle de Solow, par rapport à l'investissement technologique et par la suite dans la création de nouvelles technologies. Cette conclusion semble être confirmée par les études de Acs et Audretsch (1990) qui ont trouvé que la corrélation entre l'investissement dans la recherche (R&D) et le développement et le nombres des innovations est positive. Toutefois, des études récentes montrent que les petites entreprises ne se trouvent pas dans une situation désavantageuse. Certes, en valeur absolue, les dépenses de R&D dans les grandes entreprises sont plus importantes mais en valeur par tête, les données empiriques ne montrent pas la même tendance (Arvanitis, 1997 et Castany et al., 2005). De plus, les études de Yang et Huang (2005) montrent que les dépenses en R&D entraînent un taux de croissance plus élevé pour les petites entreprises sur un échantillon d'entreprises Taiwanais dans le secteur électronique (Yang et Huang, 2005). Les dépenses en R&D ne peuvent ainsi être utilisées comme une mesure unique de la capacité d'innovation. Le nombre des brevets est également un indice fréquent pour

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1. Pratten (1971) trouve que les petites entreprises sont moins efficaces que les grandes. Les études de Alvarez et Crespi, 2003, Caves et Barton, 1990, Gumbau-Albert and Maudos, 2002, Torii, 1992 et Meeusen and van Den Broeck, 1977 montrent que l'efficacité de l'entreprise augmente avec sa taille. Plusieurs études sur l'écart de revenus des travailleurs à travers la taille de l'entreprise révèlent que les plus petites et les plus jeunes entreprises payent moins leurs employés (Brown et Medoff, 1989 et 2003, Winter-Ebmer et Zweimuller, 1999, Wunnava et Ewing, 2000). Voir Van Praag et Versloot (2007) pour un revue détaillé sur le rôle de l'entrepreneuriat dans l'économie.

mesurer le niveau d'innovation de l'entreprise. Avec cette mesure, les données empiriques indiquent souvent que des grandes compagnies produisent plus de brevets que leurs rivales (Acs et Audrestch, 1990, Almeida et Kogut, 1997). Love et Ashcroft (1999) trouvent que le nombre de brevets augmente avec la taille des entreprises sur un échantillon de firmes écossaises. Pourtant, en utilisant le nombre des innovations par tête pour mesurer le niveau d'innovation de l'entreprise, les résultats montrent que les PME sont plus efficaces dans la création de brevets (deux fois plus dans les études de Acs et Audrestch (1990)) ; la relation avec la taille de l'entreprise est négative dans Love et Ashcroft (1999). D'autres résultats très intéressants de Almeida et Kogut (1997) sont que les PME produisent plus de brevets dans les champs soit disant moins exploités tandis que les grandes se concentrent dans les champs plus exploités et que le nombre des citations des brevets des PME n'est pas inférieur à celui des grandes firmes. Dans une certaine mesure, ces résultats montrent l'importance de l'entrepreneuriat et les PME dans la création d'innovations et la croissance économique.

De fait, Lazear (2003) souligne le rôle important de l'entrepreneur dans l'économie moderne dans la première ligne de ses études : *"The entrepreneur is the single most important player in a modern economy"*. Contrairement à la prédiction selon laquelle la mondialisation de l'économie pourrait créer un environnement plus hostile au développement des PME, l'entrepreneuriat "ré-émerge" comme une force vitale de la croissance économique dans les pays développés. D'un côté, il est vrai que la mondialisation entraîne des coûts fixes concernant l'étude des marchés étrangers, la négociation avec les gouvernements étrangers, qui rendent difficile l'accès des PME au marché. Les grandes firmes susceptibles d'exploiter des économies d'échelle pourraient amortir ces coûts et ainsi devenir plus compétitives par rapport à leurs rivales. Pourtant, de l'autre côté, depuis l'ère de la mondialisation (à partir des années 80 du 20<sup>ème</sup> siècle), on constate la renaissance de l'entrepreneuriat dans l'économie mondiale. Le rôle relatif des PME augmente dans les pays développés de l'Amérique du Nord comme de l'Europe. Leur contribution dans le PIB du pays, leur part de marché, croissent suite une longue période de diminution

après la Guerre (Audretsch et al., 2006). De plus, l'émergence de l'entrepreneuriat se manifeste par sa capacité de création d'emplois. Baldwin (1998) trouve que la part des employés dans les entreprises les plus petites (dont l'effectif est inférieur à 100) augmentait tandis que celle des grandes diminuait pendant la période 1973-1992 au Canada. Les résultats similaires sont remarqués aux Etats Unis pendant la période 1972-1988 dans les recherches de Davis et al. (1996), au Royaume Uni dans Gallagher et Stewart (1986) pendant la période 1971-1981, dans Carree et Thurik (1998) pour treize pays européens pendant le période 1990-1994. Heshmati (2001) montre que la création d'emploi est négativement liée à la taille de l'entreprise sur des données des entreprises Suédoises. Konings et al.(1996) trouvent que les PME créent plus d'emploi par rapport à leurs rivales dans un pays en transition (cas de la Pologne). Babetski et al. (2004) trouvent également le même résultat dans une études sur le marché de travail au Kyrghyzstan. Les petites entreprises créent plus d'emplois. Il faut noter que dans les pays en voie de développement, les PME occupent souvent une part très importante, et même dominante, sur le marché du travail (Tybout, 2000). Ainsi, le rôle de l'entrepreneur dans la création des nouveaux emplois est non négligeable.

En ce qui concerne la liaison économétrique, les études utilisant les données au niveau d'entreprises - pour examiner la relation entre la taille et l'âge de l'entreprise et le taux de création d'emploi - sont inspirées de la loi de Gibrat<sup>2</sup> (1931). Sur le plan empirique, les résultats des études montrent que dans la plupart des cas, le taux de croissance de l'effectif est plus important dans les moins grandes entreprises, à la fois pour tous les secteurs et dans un secteur donné(van Praag et Versloot, 2007). La tentative d'infirmer ou de confirmer la loi de Gibrat sur la relation entre le taux de croissance de l'entreprise et sa taille entraîne l'élargissement du concept de croissance de l'entreprise. Il ne se limite plus au taux de croissance du nombre d'employé mais aussi au taux de croissance de la productivité par travailleur, au taux de croissance de la valeur ajoutée, des actifs ou du chiffre d'affaire etc. De Kok et al. (2005) trouvent que la relation entre le taux de

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2. La loi de Gibrat postule notamment que le taux de croissance de la firme est indépendant de son rang dans la distribution des tailles.

croissance de la productivité en termes de valeur ajoutée et la taille de l'entreprise est négative. Autrement dit, les plus petites entreprises présentent un taux de croissance de la valeur ajoutée plus important. Un résultat similaire est présenté dans les études de Rodriguez et al. (2003). La loi de Gibrat n'est donc pas vérifiée.

Le retour de l'entrepreneuriat comme un moteur de croissance dans l'économie mondiale fait l'objet de plusieurs travaux. Ceux ci cherchent à l'expliquer et développer les modèles théoriques de base appliqués à cette relation. Sur le plan empirique, la comparaison entre les performances des PME et des grandes entreprises intéresse également beaucoup de chercheurs. Majumdar (1997), utilisant le niveau de productivité (le ratio entre la valeur ajoutée et le coût de production) et le niveau de rentabilité pour mesurer la performance des entreprises, montre que les grandes entreprises sont plus rentables mais moins productives que les PME. L'effet de débordement (spillover effect) dans l'économie de la connaissance est utilisé pour expliquer pourquoi les petites entreprises, en investissant moins en R&D, pourraient se procurer des "knowledge input" pour leur production (Audretsch et al. , 2006) et semblent ainsi plus efficace étant données que le ratio entre leur dépenses en R&D et leurs brevets est inférieur à celui des grandes. De plus, la qualité de leurs innovations n'est pas sans doute inférieure à celle des grandes entreprises (Van Praag et Verlost, 2007).

Vu le rôle de "single most important player in modern economic" (Lazear, 2003) on pourrait poser un grand nombre de questions concernant l'entrepreneur. Qui est l'entrepreneur ? Qui pourrait le devenir et pourquoi ? Quelles sont les caractéristiques qui font d'un individu un entrepreneur réussi ? Bien que l'entrepreneuriat soit largement reconnu comme un moteur dans le développement économique, il manque encore de consensus sur les motivations des activités entrepreneuriales. Ceci entraîne différents mesures de l'entrepreneuriat et beaucoup de complexité dans l'indentification de l'entrepreneur (Audretsch et al., 2006). Les études sur ce sujet recourent à un certain nombre de mesures, y compris le taux de travailleurs indépendants (le nombre des travailleurs indépendants sur la population active), le nombre des activités commerciales (ou en d'autres termes

le nombre des micro entreprises), le taux de nouvelles entreprises (le nombre de nouvelles entreprises sur le nombre des entreprises total) . Parmi plusieurs mesures, le taux de travailleurs indépendants est collecté dans plusieurs pays, et il est largement utilisé pour mesurer le niveau entrepreneurial afin de faciliter la comparaison entre les pays et à travers le temps. Etant donné leur importance économique, des politiques concernant les activités de l'entrepreneur se sont développées ces dernières années. De ce fait, il semble évident que les autorités ont besoin d'être informées sur la dynamique de l'entrepreneur et sur les déterminants de sa croissance et des régulations correspondantes.

Dans les pays développés, les deux dernières décennies voient l'émergence d'études théoriques et empiriques sur la relation entre les caractéristiques de l'individu et de l'entreprise et l'entrée dans le secteur du travail indépendant, sur la survie et la croissance des petites et micro-entreprises. Pourtant, en dépit de l'attention portée aux petites et micro-entreprises par les politiques de développement, il y a encore peu d'études systématiques pour tester si la dynamique des PME et micro-entreprises dans les pays en voie de développement ressemble à celle des pays développés (Fajnzylber et al., 2006). Si les différences ne sont pas trop importantes, les autorités auront à leur disposition un cadre d'analyse puissant sur les activités des PME et les politiques concernant l'entrepreneuriat. De plus, dans ce cas, cette similitude entre le parcours des PME dans les pays en voie de développement (PED) et dans les pays développés, pourrait fournir des preuves additionnelles au débat sur le rôle des PME et des micro-entreprises dans la croissance des PED. Dans les pays développés, l'ouverture d'un "business" et devenir travailleur indépendant constitue souvent une alternative préférable chez les salariés. Cependant, dans les PED, une proportion importante des travailleurs indépendants est informelle. Ils sont considérés comme incapables de trouver un travail dans le secteur salarié et ainsi choisissent le travail indépendant par défaut. Ils sont caractérisés par un niveau faible de productivité et d'efficacité. Ces deux regards sur le secteur du travail indépendant dans les PED et les pays développés entraînent différentes implications sur l'entrée, la dynamique et la réglementation des micro et petites entreprises. De plus, dans les PED

où l'économie informelle est un phénomène courant, selon que les micro-entreprises informelles seraient complémentaires ou substituables aux entreprises formelles, les politiques correspondantes diffèrent (Adair, 2002).

De fait, nous avons **trois objectifs** dans cette thèse.

Notre **premier objectif** est d'identifier ce qui pousse une personne à choisir le travail indépendant plutôt qu'un emploi salarié. Il s'agit d'un sujet largement abordé dans la littérature entrepreneuriale mais d'un champ d'étude encore peu étudié pour le cas du Vietnam. Les travailleurs indépendants occupent une part très importante sur le marché de travail du Vietnam. En gérant les micro et petites entreprises, les travailleurs indépendants contribuent à une offre d'emploi importante sur marché, non seulement pour la personne qui crée l'entreprise mais aussi pour d'autres sur le marché du travail. Pour cette raison, leur rôle dans la création d'emploi ainsi que dans la lutte contre la pauvreté est bien reconnu par les économistes. Il est donc important de savoir qui sont ces travailleurs et quel pourrait être le facteur qui les pousse à choisir le travail indépendant au lieu d'un travail salarié. Nous mettons l'accent sur le rôle de l'écart de revenus dans la décision des travailleurs.

Notre **deuxième objectif** dans cette thèse est d'étudier les facteurs qui influencent la performance des micro entreprises. En terme d'effectifs, les micro et petites entreprises représentent la majorité des entreprises en général et elles absorbent également une part très importante de la main d'oeuvre sur le marché du travail. En terme de croissance économique, il s'agit des entités les plus dynamiques de l'économie. Ces entreprises contribuent pour une part non négligeable à la forte croissance économique du Vietnam. Vu que l'économie du Vietnam va aborder l'étape "efficiency-driven"<sup>3</sup> dans laquelle les économies d'échelle jouent un rôle primordial dans l'efficacité de la production et donc dans la croissance économique, on s'interroge sur la performance des micro et petites entreprises. Dans la perspective où ces entreprises de petite taille pourraient devenir plus grandes,

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3. Selon Schwab et al. (2002) la compétitivité d'un pays se différencie par le niveau du développement de l'économie qui se compose de trois étapes spécifiques : (1) factor - driven stage, (2) efficiency-driven stage et (3) innovation-driven stage ; et deux périodes de transition entre ces trois étapes. Voir Acs et al. (2008) pour les définitions détaillées de ces étapes et périodes de transition.

plus compétitives et plus puissantes dans l'avenir, des mesures visant à promouvoir la croissance de ces entreprises ont été promulguées. Afin d'aider les autorités à offrir des politiques correspondant mieux aux besoins des entreprises, nous tenons ainsi à montrer empiriquement les déterminants de la performance des micro et petites entreprises.

Dans le cadre des travaux empiriques, les analyses portant sur les déterminants de la croissance des entreprises sont nombreuses, de toute évidence beaucoup plus pour le cas des pays développés mais avec le temps, le cas des pays en voie de développement reçoit également une attention croissante des économistes. Toutefois, malgré le fait que les entreprises ne sont pas homogènes face aux barrières de croissance, les travaux empiriques qui ont pour but de quantifier l'impact des déterminants du développement de l'entreprise sont assez modestes. En effet, les entreprises ne s'exposent pas de même façon aux barrières à la croissance, la " solution unique à appliquer en toute circonstance" - "one size fits all policy"- a été ainsi remise en cause. De ce fait, notre **troisième objectif** est de présenter une étude empirique sur l'hétérogénéité des entreprises à l'égard de différents obstacles de la croissance. Nous montrons que le degré de contrainte auquel l'entreprise doit faire face varie en fonction des caractéristiques de l'entreprise et selon les barrières auxquelles elles font face.

Cette thèse porte sur un pays particulier, le Vietnam. Nous utilisons dans nos analyses une seule base de données, l'enquête du niveau de vie des ménages -VHLSS 2004. Avant de présenter en détail les apports de la thèse, nous présentons une brève description du contexte socio-économique dans lequel fonctionnent les micro-entreprises et nous décrivons en général<sup>4</sup> l'enquête utilisée.

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4. Les caractéristiques détaillées des données utilisées pour chaque analyse sont présentés dans les chapitres correspondants.



## 2 L'Economie du Vietnam et l'enquête VHLSS 2004

### 2.1 Panorama macroéconomique

Le Vietnam est un pays d'Asie du Sud Est membre de l'ASEAN (l'Association des Nations de l'Asie du Sud-Est, organisation politique, économique et culturelle) depuis 1995. Avec une superficie d'environ 330 mille km<sup>2</sup>, le Vietnam se situe au 13<sup>ème</sup> rang du monde en ce qui concerne la population avec environ 86 millions d'habitants en 2008. Le pays est jeune, plus de la moitié de la population est âgée de moins de 27 ans. Le taux de croissance de la population annuel est de 1,2 pour cent. Plus d'une vingtaine d'années après la réforme économique de 1986 qui marque le début de la transition vietnamienne, le PIB par tête est de 890 dollars américains à prix courants. Le taux de croissance du PIB, variant entre 6 et 8 pour cent par an, classe le Vietnam parmi les pays ayant le rythme de croissance le plus important du monde. Le tableau (1.1) présente quelques indicateurs récents du développement du Vietnam.

TABLEAU. 1.1 – Indicateurs de développement du Vietnam

		2000	2008	Monde 2008
Population	Million	77	86	6692
	Taux de croissance annuel %		1,2	1,2
PNB	Par tête (USD)*	390	890	8613
PIB	Taux de croissance annuel %	6,8	6,2	2,0
	Milliard (USD)	31,2	90,0	60587.0
Espérance de vie	Années	69	74	69
Taux de pauvreté***	% de la population	37,4 **	16,0(+)	
Valeur ajoutée (% of PIB)	Agriculture	24,5	22,1	
	Industrie	36,7	39,7	
	Services	38,7	38,2	

\* : Valeur au prix courant

\*\* : Valeur en 1998

\*\*\* : Les taux de pauvretés sont estimés en fonction du seuil de pauvreté déterminé par GSO et la Banque Mondiale

+ : Valeur en 2006

Sources : GSO et La Banque Mondiale (WDI)

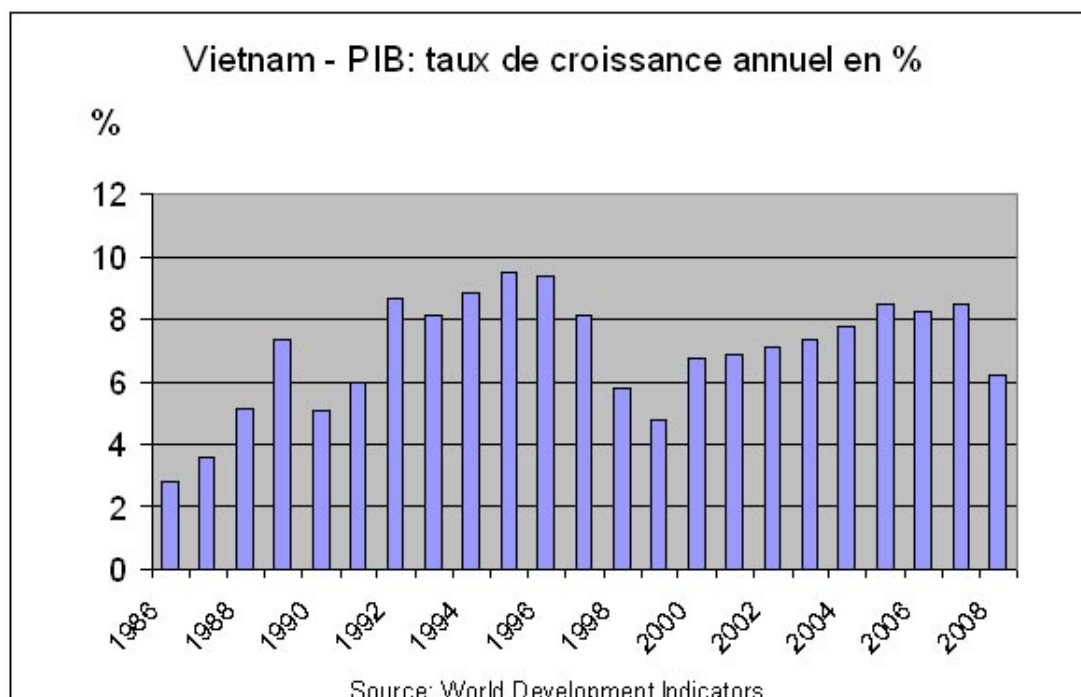


FIGURE 1.1 –

Avant la transition économique, le secteur privé n'existait pas au Vietnam. Seul le secteur étatique, y compris les entreprises étatiques et les co-opératives, apparaissait comme créateur formel de l'emploi. Face à une grave crise socio-économique, le gouvernement du Vietnam a procédé à une profonde réforme économique vers la fin des années 80<sup>5</sup>. La transition économique du Vietnam de l'économie planifiée à l'économie du marché est largement étudiée dans la littérature. Nous pouvons citer entre autres : Auffret (2003); Arkadi et Do(2004), Justino et Litchfield (2003), Brassard (2004), Hemlin et *al.* (1998), Tran et *al.* (2009). Le secteur privé a ainsi vu le jour il y a environ 20 ans. Dès lors, parallèlement à l'arrivée des investissements directs étrangers, la structure économique du Vietnam change graduellement.

Les graphiques 1.1 et 1.2 nous montrent le taux de la croissance du PIB et l'évolution de l'ouverture internationale du Vietnam de 1986 à 2008. La part des exportations et des importations dans le PIB du Vietnam augmente sans cesse pendant 22 ans.

Le taux de croissance rapide déclenché par cette réforme a permis une augmentation

5. Pour les informations détaillé sur la réforme économique voir Tamara, 2006



FIGURE 1.2 –

Source : World Development Indicators

importante du revenu par tête et une forte diminution du taux de pauvreté<sup>6</sup>. Les résultats préliminaires du processus de transition permettent l'amélioration nette du niveau de vie des ménages au Vietnam surtout pour le segment le plus pauvre<sup>7</sup>.

## 2.2 L'enquête VHLSS2004

Nous utilisons dans cette thèse l'enquête du niveau de vie des ménages en 2004 (VHLSS 2004) menée par l'Office de statistiques générales du Vietnam (GSO) sous l'assistance technique de la Banque Mondiale. Il s'agit d'une enquête tirée d'une série de cinq faites tous les deux ans au Vietnam de 2002 à 2010. Les deux dernières enquêtes ont été réalisées en 2006 et en 2008 mais elles n'ont pas été publiées entièrement pour le moment. Une autre raison pour laquelle nous utilisons l'enquête 2004 sera évoquée

6. Le taux de pauvreté est estimé via les dépenses moyennes mensuelles par tête selon le seuil de pauvreté calculé par GSO et la Banque Mondiale comme suit : 1998 : 149 milles dong et 2006 : 213 milles dong. Dong : monnaie domestique du Vietnam ; Taux de change dong/ dollar américain (VND/USD) est de 16000 VND/ 1 USD en 2006

7. Pour plus de détail sur la réduction de pauvreté au Vietnam pendant le début du processus de transition, voir Vietnam Poverty Analysis, prepared for the Australian Agency for International Development by the Centre for International Economics" (2002).

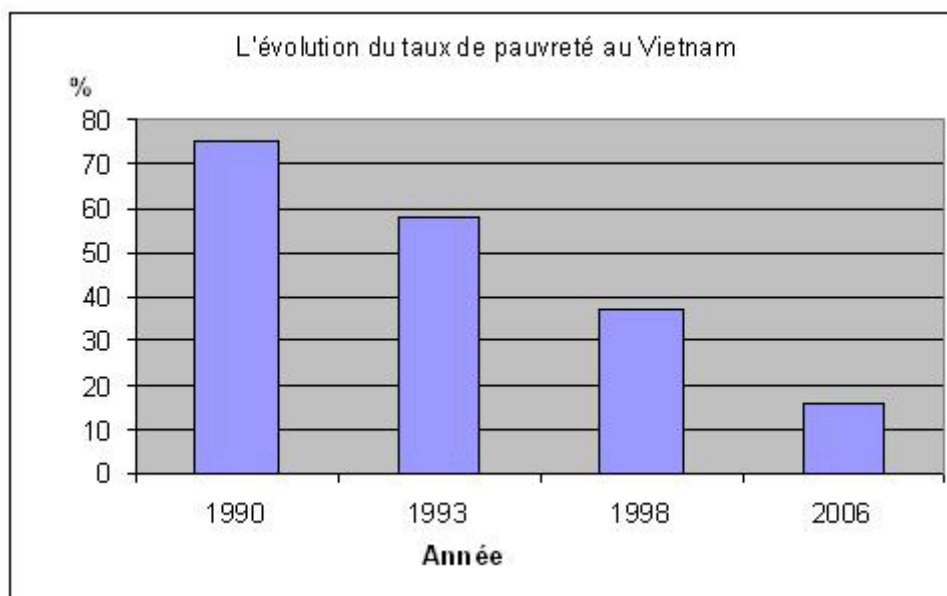


FIGURE 1.3 –

Source : GSO

un peu plus loin. L'approche de ces enquêtes correspond aux normes utilisées dans les enquêtes sur le niveau de vie de la Banque Mondiale. L'échantillon est représentatif de l'ensemble du pays et reflète la situation de huit régions économiques.

Chaque enquête comprend un questionnaire sur les ménages et un sur les communautés. Le questionnaire sur les communautés comprend des questions sur les caractéristiques démographiques et physiques, les activités et les conditions économiques générales, le niveau de développement de l'infrastructure physique, les informations sur le transport, la production agricole etc. au niveau de communauté.

Le questionnaire sur les ménages couvre un champ large d'informations concernant les individus et les ménages, comme les caractéristiques démographiques, le niveau d'éducation, l'emploi, la santé, le revenu, les dépenses, l'épargne, le logement et l'accès aux services publics etc.

Etant conçue initialement pour étudier la pauvreté et l'inégalité, l'enquête VHLSS est largement utilisée pour analyser plusieurs autres aspects de l'économie, y compris les activités économiques familiales. La version de 2004 est la seule dans la série de cinq

TABLEAU. 1.2 – Caractéristiques de la population du Vietnam en 2004

	%	Sexe masculin	Zone urbaine	Age (médiane)
Total	100	49.55	23.49	26
Pop. active	59	50.17	21.49	36

Source : Calculs de l'auteur à partir de VHLSS 2004

TABLEAU. 1.3 – Niveau d'éducation de la population active du Vietnam en 2004

	Population active		
Unité : %			
Niveau d'étude	Total	Homme	Femme
Ecole primaire	35.2	30.2	40.2
Collège	42.9	44.4	41.4
Lycée	19.0	21.7	16.3
Bac+3 et plus	2.9	3.7	2.1

Source : Calculs de l'auteur à partir de VHLSS 2004

enquêtes dans lesquelles les informations assez détaillées sur les entreprises tenues par des ménages ont été collectées. La section 4 et surtout la section 10 de cette enquête sont réservées particulièrement à ce but. C'est aussi pour cette raison que nous choisissons cette version dans notre études sur les micro entreprises.

L'échantillon de 2004 comprend environ 9000 ménages avec un peu plus de 40 mille individus. Le tableau (1.2) nous donne une image simple de la population du Vietnam en 2004. Il s'agit d'une population jeune avec au moins 50% de personnes âgées de moins de 26 ans, masculine à un peu moins de 50% et habitant en zone urbaine pour environ 23%. La population active représente 59% de la population totale. La part des hommes est légèrement plus élevée dans la population active que dans la population totale. L'âge moyen de cette population est 36 ans (l'âge médian est similaire). En ce qui concerne le niveau d'éducation, environ 22% de la population active a terminé le collège et fréquente le lycée ou un cycle d'études supérieures. En moyenne, le niveau d'éducation des hommes est supérieur à celui des femmes (tableau 1.3).

Les statistiques préliminaires montrent qu'environ 4000 activités entrepreneuriales non agricoles (non-farm business), en d'autres termes micro entreprises, sont identifiées à

partir de l'enquête 2004. Ces activités sont menées par 3500 ménages aux environs. Ainsi, par un simple calcul, nous trouvons que les activités commerciales de taille familiale sont très répandues au Vietnam : au moins un tiers des ménages est concerné par les activités commerciales non agricoles.

## 2.3 Marché du travail

En dix ans, le nombre des travailleurs au Vietnam est passé de 37,6 millions en 2000 à 44,9 millions en 2008, soit une augmentation de 19,4%. Le secteur privé emploie 87% de la main d'oeuvre sur le marché en 2008. Par rapport à l'an 2000, cette proportion a baissé légèrement. L'évolution de la main d'oeuvre dans le secteur étatique suit une courbe en cloche. Après une légère hausse de 2000 à 2003, on observe une diminution marquée à partir de 2006. Cette évolution s'explique en partie par l'augmentation permanente de la main d'oeuvre dans certains services publics tel que la santé, l'éducation, l'intermédiation financière, l'administration publique et la défense, ainsi que les activités du Parti et des associations. Après 2003, cette hausse ne pouvait plus compenser la forte réduction des travailleurs dans d'autres secteurs d'activités comme agriculture, sylviculture, transformation, commerce etc. Bien qu'il ne représente que 3,37% de la main d'oeuvre totale en 2008, le secteur à participation étrangère connaît une forte croissance, avec une hausse de 350% de l'effectif par rapport à l'an 2000<sup>8</sup>.

En allant plus en détail, on trouve que la classification des travailleurs, que ce soit en fonction des secteurs d'activités ou en fonction de la propriété (ownership), est compliquée. L'enquête VHLSS 2004 montre que le multi-emploi (ou pluri-activité) est un phénomène assez courant chez les travailleurs. Plus de 40% des travailleurs déclarent d'avoir deux emplois ou plus. Les statistiques dans le (tableau 1.4). est représentatif au niveau du pays. Le secteur agricole demeure le secteur qui absorbe le plus de main d'oeuvre, que ce soit pour le premier ou le deuxième emploi. Pour les personnes qui sont salariées dans leur premier emploi, les activités agricoles constituent une deuxième activité qui

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8. Source : GSO ; <http://www.gso.gov.vn>

améliore significativement le revenu. Près de 9% des travailleurs qui sont salariés dans leur premier emploi déclarent avoir un deuxième emploi dans le secteur de l'agriculture. Dans le couple inverse "salarié-paysan", les paysans qui sont salariés dans leur deuxième emploi représentent 8,5 % de la population active. Les personnes qui ont un emploi dans

TABLEAU. 1.4 – Distribution des travailleurs (Valeur en %)

	1er emploi	2ème emploi			Total
		Salarié	Paysan	Travailleur Ind.	
Salarié	17.24	1.25	8.95	1.16	28.61
Paysan	29.46	8.56	10.93	4.88	53.84
Travailleur Ind.	10.39	0.77	5.65	0.75	17.55
Total	57.09	10.58	25.54	6.78	100.00

Travailleur Ind. : Travailleur indépendant

Source : Calculs de l'auteur à partir de VHLSS2004

le secteur agricole et un autre dans le secteur du travail indépendant représentent plus de 10 % de la population active : 4,88% pour celles qui sont paysans en premier emploi et 5,65 % pour celles qui sont travailleurs indépendants en premier emploi.

Pour les personnes qui n'ont qu'un seul emploi, les salariés et les travailleurs indépendants non agricoles représentent respectivement 17,2% et 10,4% de la population active. Les salariés et les travailleurs indépendants sont les moins nombreux à disposer d'un deuxième emploi dans le secteur correspondant. La part des "salarié - travailleur indépendant" occupe une part très modeste dans la main d'oeuvre, moins de 2 %.

### **Les travailleurs indépendants**

Le tableau 1.5 nous permet de comparer les caractéristiques démographiques selon les catégories de travailleurs. Seules, les personnes appartenant uniquement à une catégorie de travailleurs sont retenues pour cette comparaison. L'échantillon est ainsi réduit à 16791 sur un total de 23775 observations. Le nombre des travailleurs indépendants, salariés et paysan est de 2697, 4514 et 9580 personnes respectivement, soit 16%, 27% et 57%. A première vue, on trouve facilement que le profil des travailleurs n'est pas similaire. Les femmes dominent le secteur du travail indépendant. Elles s'occupent 59,5% des travailleurs indépendants. La part des femmes dans le secteur agricole est aussi supérieure

TABLEAU. 1.5 – Caractéristiques des travailleurs appartenant à un seul catégorie de travailleurs

Catégorie de travailleurs		% du catégorie	Age-moyen	Education
Travailleur Ind.	Homme	40.5	40.38	2.2*
	Femme	59.5	40.46	1.9*
Salarié	Homme	59	33*	2.3*
	Femme	41	31*	2.2*
Paysan	Homme	45	33.26*	1.8*
	Femme	55	31.62*	1.6*

N.B. : les travailleurs appartenant à plusieurs catégories de travailleurs se sont pas comptés dans les calculs.

Travailleur Ind. : Travailleur indépendant

\* : indique que les moyennes des hommes et des femmes sont statistiquement différentes.

Niveau d'éducation : 1 : école élémentaire ; 2 : collège ; 3 : lycée ; 4 : école supérieure

Source : Calculs de l'auteur à partir de VHLSS 2004

(55%), mais la différence est moins importante. Les hommes dominent le secteur salarial. Leur part est de 59% . Les travailleurs indépendants semblent plus âgés que les autres. Ceci s'explique par le fait que les travailleurs indépendants restent plus longtemps au travail tandis que les salariés, étant donné les réglementations, doivent arrêter de travailler à un certain âge. De plus, les personnes plus âgées rencontrent plus de concurrence de la part des jeunes quand elles recherchent un emploi salarial. Les statistiques nous montrent également que les paysans arrêtent de travailler plus tôt. Leur âge moyen est de 33 et 33,5 ans respectivement pour les hommes et les femmes. Finalement, en ce qui concerne le niveau d'éducation, celui des travailleurs indépendants est supérieur à celui des paysans, et on trouve que pour les trois catégories de travailleurs, le niveau d'études des hommes est plus élevé que celui des femmes.

En bref, le travail indépendant devient une source importante de la création d'emploi. Avec plus de 20 % de la population active travaillant dans le secteur de travail indépendant, que ce soit dans le premier ou le second emploi, ce secteur mérite une bonne position dans les politiques de développement de l'Etat.



## 2.4 Les micro entreprises

Avec la réforme économique, le secteur des entreprises non étatiques connaît une forte croissance en ce qui concerne le nombre des entreprises, le nombre d'emplois créés ou le chiffre d'affaire. Le tableau 1.6 montre l'évolution de la distribution des employés selon les types d'entreprises. Les résultats sont tirés d'une enquête d'entreprises menée par le GSO.

TABLEAU. 1.6 – Distribution des travailleurs

	2000	2004	2007
<b>Total en millions de personne</b>	<b>3,5</b>	<b>5,8</b>	<b>7,5</b>
Entreprises étatiques	59	40	24
Entreprises non-étatiques	29	43	53
<i>Collective</i>	<i>5.15</i>	<i>2.74</i>	<i>2.02</i>
<i>Privée</i>	<i>6.68</i>	<i>7.48</i>	<i>6.95</i>
<i>Coopérative</i>	<i>0.00</i>	<i>0.01</i>	<i>0.01</i>
<i>SARL</i>	<i>14.61</i>	<i>24.15</i>	<i>26.28</i>
<i>SA avec participation étatique</i>	<i>1.75</i>	<i>3.19</i>	<i>5.89</i>
<i>SA sans participation étatique</i>	<i>1.23</i>	<i>5.33</i>	<i>12.13</i>
Entreprises à participation étrangère	12	18	22
<b>Total en pourcentage</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source : GSO

Depuis l'an 2000, la part des employés recrutés par les entreprises non étatiques augmente de 29,4% à 53,2 % en 2007. Le secteur non-étatique est ainsi devenu le secteur qui crée le plus de travail salarié. Dans ce secteur, les entreprises à responsabilité limitée (SARL) embauchent le plus de personnel, plus de 26% de l'emploi du secteur des entreprises. La croissance la plus importante appartient aux sociétés par action sans participation de l'Etat. Sa part dans l'effectif total des employés monte de 1,23% à 12% en sept ans, de 2000 à 2007. Cette augmentation s'explique d'une part par la privatisation des entreprises étatiques, d'autre part par la croissance des entreprises non étatiques elles mêmes.

En ce qui concerne le nombre des entreprises, les SARL et les entreprises privées représentent plus de 75% du total des entreprises, soit plus de cent mille entreprises en

2006. Pourtant, il faut noter que les statistiques ci-dessous ne concernent que le secteur formel. Les entreprises individuelles, autrement dit les entreprises familiales, ne sont pas comptées dans les entreprises ci-dessous. Dans les recherches récentes, on trouve que les activités économiques familiales constituent également une source importante d'emploi, surtout dans le cas des travailleurs indépendants. L'enquête sur les entreprises familiales non agricoles (ci-après appelées micro entreprises) (tableau 1.7), menée indépendamment de l'enquête d'entreprises, montre que les entreprises individuelles jouent un rôle très important dans la création d'emplois. Près de 5,6 millions de personnes travaillent dans les entreprises familiales en 2005, contre 5,6 millions dans les entreprises non familiales (y compris les entreprises non étatiques et les entreprises à participation étrangère). Le tableau (1.7) présente brièvement la taille et la distribution des micro entreprises selon le secteur d'activité. Les entreprises familiales sont en général très petites. Il s'agit souvent de travailleurs indépendants. La taille moyenne est de 1,8 personnes par entreprise y compris le chef d'entreprise. Les entreprises se concentrent sur le secteur des services et du commerce (75%), et en particulier du commerce avec 44% des entreprises et 35% de la main d'oeuvre.

TABLEAU. 1.7 – Distribution des entreprises familiales

	2002	2003	2004	2005
	Unité : 1000			
Nombre d'entreprises	<b>2619</b>	<b>2712</b>	<b>2914</b>	<b>3053</b>
Nombre de personnes engagées	<b>4437</b>	<b>4843</b>	<b>4988</b>	<b>5584</b>
Secteur d'activité	<b>Industrie et construction</b>			
Nombre d'entreprises	757	788	760	767
Nombre de personnes engagées	1699	1987	1843	1956
Secteur d'activité	<b>Commerce, services</b>			
Nombre d'entreprises	1863	1925	2154	2286
Nombre de personnes engagées	2738	2855	3145	3628

Source : GSO

Les femmes représentent jusqu'à 44,5% de la main d'oeuvre des entreprises familiales et le taux de participation varie en fonction des activités économiques. Il est plus important dans les secteurs " traditionnellement " réservés aux femmes, à savoir le commerce, la restauration, l'hôtellerie. Le taux de participation global des femmes n'est pas très

différent entre les deux groupes d'entreprises familiales et non familiales (44,5% contre 43%). Pourtant, en fonction des secteurs, il y a des différences remarquables (tableau 1.8). La participation des femmes des entreprises familiales est plus élevée que celle des entreprises non familiales dans certains secteurs : commerce, services de réparation de moto, hôtellerie et restauration, formation et éducation. Une petite remarque mérite d'en parler ici, la participation des femmes est calculée pour l'ensemble des activités commerciales et pour les services de réparation des motos. On peut en déduire donc que ce taux élevé est dû principalement à la participation des femmes au commerce. La participation est plus faible dans les industries de transformation, la fourniture de l'électricité, du gaz et de l'eau, le transport et la communication etc.

TABLEAU. 1.8 – Taux de participation des femmes dans les entreprises en 2005

	Micro entreprise	Enterprise
Total	44.5	43.0
Exploitation minière	22.3	22.5
Transformation	35.1	58.4
Alimentation en électricité, gaz et eau	10.8	18.0
Construction	34.2	13.2
Commerce, services de réparation des motos...	46.8	38.8
Hôtellerie and Restauration	68.7	52.6
Transport et communication	14.1	24.5
Intermédiation financière	52.1	52.4
Consultance et services immobiliers	44.6	25.6
Formation et éducation	74.4	51.0
Santé et affaires sociaux	39.0	60.5
Culture et activités sportives	53.9	43.8
Services publics ou privés	52.5	49.7

Source : GSO

Etant donné la taille très petite, le revenu souvent faible et/ou l'absence de lieu de travail fixe, une partie de ces entreprises familiales ne sont pas enregistrées auprès des autorités concernées (ou n'ont pas à l'être). Selon l'enquête sur les entreprises familiales menée par le GSO, globalement, environ 38% des micro entreprises sont enregistrées (tableau 1.9). Le taux d'enregistrement des entreprises varie fortement en fonction des activités. En utilisant l'enquête ménages VHLSS 2004, nous trouvons un taux d'enregis-

TABLEAU. 1.9 – Taux d’enregistrement des micro entreprises par secteur en pourcentage de toutes les entreprises du secteur

Année	2002	2003	2004	2005
TOTAL	30.89	38.77	35.01	37.73
Industrie et construction	15.49	18.84	19.74	24.39
Commerce, services	37.14	46.62	40.4	34.06

Source : GSO

trement nettement inférieur, aux alentours de 21%. La différence peut s’expliquer par le fait que dans l’enquête ménages, chaque membre du ménage est considéré comme chef d’une entreprise si les autres membres mènent des activités différentes. Tandis que dans l’enquête d’entreprises familiales, tous les membres d’un ménage sont considérés comme membres d’une unité de production unique, et il n’y a donc qu’un seul chef d’entreprise par ménage.

Malgré un taux d’enregistrement non négligeable, les activités économiques familiales sont souvent considérées comme des activités précaires et un moyen de subsistance. Les travailleurs recourent à ces activités parce qu’ils n’arrivent pas à trouver un emploi salarié. Or, des recherches sur le micro entreprises dans différents pays montrent qu’à côté des travailleurs qui considèrent les activités économiques familiales comme une dernière solution contre le chômage ou un moyen de survie, le secteur des micro entreprises contient également des personnes choisissant volontairement le travail indépendant parce qu’ils peuvent gagner plus d’argent qu’avec une activité salariée, ou pour une raison autre que la survie.

Face à la croissance des petites et moyennes entreprises (PME) et vu leur rôle dans la création d’emplois, plusieurs mesures de politique économique visant à promouvoir leur croissance ont été menées par le gouvernement du Vietnam. Il n’en reste pas moins que d’autres mesures restent à adopter pour promouvoir la productivité et la création d’emploi dans les micro-entreprises.

## 3 Brève présentation des chapitres de la thèse

### 3.1 Les déterminants du travail indépendant

Dans le **chapitre 2** de la thèse, nous présentons une application empirique du modèle d'offre de travail indépendant au Vietnam. Nous recourons à la méthode de Heckman pour estimer l'impact des facteurs sur le choix d'occupation des travailleurs.

Dans l'ouvrage "Entrepreneurship and Economic growth"<sup>9</sup>, Audretsch et al. ont révélé le retour de l'entrepreneuriat dans l'évolution de l'économie mondiale. Par l'expression "Small has become beautiful again", ils stipulent que suite une long période où l'entrepreneuriat est tombé dans l'oubli après la Seconde Guerre Mondiale, depuis quelques dernières décennies, l'idée que l'entrepreneuriat et des petites entreprises joue un rôle comme moteur du développement socio-économique se répand à travers le monde entier. Leurs travaux portent principalement sur la relation entre l'entrepreneuriat et la croissance économique dans les pays développés mais on peut en retirer de nombreuses idées sur cette relation pour le cas des pays en voie de développement.

De nombreuses questions se posent autour de la relation fondamentale entre l'entrepreneuriat et la croissance économique. En particulier, il y a la question de ce qui détermine "l'offre d'entrepreneuriat" ou en d'autres termes l'offre de travail indépendant. L'étude de l'offre de travail indépendant ou d'entrepreneur - dans le cadre de cette thèse, ces deux termes seront utilisés de façon équivalente - remonte jusqu'aux décisions individuelles d'entreprendre. Celles-ci peuvent apparaître comme le résultat d'un arbitrage entre différentes occupations professionnelles (être entrepreneur ou salarié), arbitrage qui est fait en fonction des rémunérations relatives attendues et des caractéristiques spécifiques à chaque agent.

#### Les déterminants et leur effet attendu

##### *Education*

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9. Audretsch et al., (2006)

Le rôle de l'éducation dans la décision des travailleurs est analysé dans la plupart des recherches portant sur le sujet (Rees et Shah, 1986 ; Gill, 1988 ; Evans et Jovanovic, 1989 ; De Wit, 1993 , Bernhardt 1994 ), Kolev (1998). Selon Le (1999), l'éducation affecte la décision d'entreprendre *via* plusieurs canaux de transmission. D'une part, elle pourrait renforcer la capacité de management de l'individu et favoriser l'entrée dans le secteur du travail indépendant. D'autre part, une éducation de niveau élevé est susceptible d'encourager les gens à chercher un emploi salarié qualifié et baisser la probabilité d'entreprendre. Les résultats empiriques semblent être aussi divergents que les arguments théoriques. Certains travaux confirment une relation positive entre le niveau d'éducation et le choix de l'entreprise (Rees et Shah, 1986 ; Borjas et Bronars, 1989 et Evans et Leighton, 1989), tandis que d'autres montrent une direction opposée (Evans et Jovanovic, 1989 ; De Wit, 1993 ; Kidd, 1993 ; Destré et Henrard, 2004). Cette non convergence pourrait être résultat de la méthode d'échantillonnage ou de la spécification du modèle d'estimation.

### *Expérience*

Parallèlement à l'éducation académique, la capacité de management pourrait être acquise par l'expérience. Sur le plan empirique, l'impact de l'expérience sur la décision de l'individu semble être plus important que celui du niveau d'éducation. De plus, les travailleurs acquièrent au cours des années non seulement les connaissances et les savoir-faire mais aussi le capital nécessaire pour créer leur entreprise. L'étude de Rees et Shah (1986) montre l'impact positif de l'expérience sur la probabilité de devenir travailleur indépendant. Cependant, en introduisant la variable mesurant la capacité financière de l'individu dans le modèle, l'impact devient non significatif. Ceci implique que l'expérience devrait être considérée comme une variable mesurant le capital financier plus tôt comme une variable mesurant le capital humain.

### *Conditions familiales*

Tandis que les économistes mettent l'accent sur l'impact des variables "traditionnelles", les psychologues et dans une certaine mesure, les sociologues proposent d'inclure l'effet de variables qui relèvent des caractéristiques internes et des conditions familiales de l'individu

dans choix d'occupation (Fairlie et Robb, 2004). Le statut marital et le nombre des enfants à charge sont les premiers facteurs à prendre en compte. Rees et Shah (1986) trouvent que les gens mariés sont mieux préparés pour prendre des risques et la famille pourrait moralement soutenir les travailleurs indépendants. Le travail du conjoint joue également un rôle important dans le sens où une personne est plus prête à prendre le risque d'obtenir une marge de revenu plus importante si son conjoint a un travail (De Wit, 1993).

### *Perception du risque*

Toujours dans De Wit (1993), le rôle de la perception du risque est bien analysé dans le cadre d'un modèle théorique. Il s'agit d'un facteur important qui affecte le choix du travailleur. Les recherches empiriques de Cramer et al. (2002) et Kan et Tsai (2006) montrent qu'un individu ayant un niveau d'aversion au risque moins élevé a plus de probabilité d'être entrepreneur. Toutefois, il faut bien noter que les études empiriques sur ce déterminant sont assez limitées du fait du manque des données.

### *Capital initial*

Le rôle du capital initial dans la création de l'entreprise attire une attention particulière chez les économistes. Nombre d'études<sup>10</sup> montrent que la contrainte financière exerce un impact important sur la perspective d'être entrepreneur.

### *Revenu relatif attendu*

Le revenu relatif attendu constitue un des facteurs importants qui influencent l'offre de travail. L'hypothèse primordiale qui se cache derrière cette déclaration est que l'individu est considéré comme connaissant sa capacité et est rationnel. Ainsi, il choisirait le travail qui lui rendrait le plus d'utilité. Par conséquent, l'écart de revenu entre deux occupations qu'un individu pourrait choisir - le travail indépendant *versus* le travail salarié- va avoir une corrélation positive avec la probabilité d'entreprendre<sup>11</sup>.

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10. A savoir Evans et Jovanovic (1989); Kidd (1993); Bernhardt (1994); Blanchflower et Oswald (1998) et Constant et Zimmermann (2006)

11. Voir Bernhardt (1994); Johansson (2000); Constant et Zimmermann (2006) pour les résultats empiriques concernés

## Méthodologie et résultats obtenus pour le Vietnam

### *Méthodologie*

Dans ce chapitre, nous menons une analyse empirique sur les déterminants de l'offre de travail indépendant inspirée des recherches citées ci-dessus. Nos données sont extraites de l'enquête VHLSS2004. Cette question a été mentionnée partiellement dans les recherches de Vijverberg et Haughton (2002). Pourtant ils se sont concentrés sur la survie des entreprises et non sur le choix des statuts. Dans le cadre de notre étude, nous proposons une analyse structurelle sur le choix de travailleur en utilisant la méthode de Heckman en deux étapes. Nous estimons le revenu attendu du travailleur pour les deux occupations en corrigeant le biais de sélection. Il s'agit du biais dans les résultats des estimations du à la participation non aléatoire des travailleurs au secteur préféré. L'écart de revenu attendu est ensuite calculé et introduit dans l'équation de participation comme une variable expliquée.

### *Résultats obtenus*

Afin d'obtenir l'écart du revenu attendu des travailleurs dans les deux secteurs, nous estimons l'équation de revenu attendu selon de modèle de Mincer. Les résultats montrent que l'effet de l'âge sur le revenu correspond au modèle de Mincer. La relation entre le revenu et l'expérience n'est pas linéaire. L'effet du niveau de l'éducation sur le revenu est positif et significatif. Les données empiriques indiquent également que le statut marital porte un impact positif sur le revenu des hommes. Par contre, le coefficient n'est pas significatif chez les femmes. L'emplacement géographique et les branches économiques affectent significativement le niveau de revenu des hommes. Les hommes dans les grandes agglomérations gagnent plus. Le niveau de revenu est plus important pour certaines branches économiques. Cependant, le revenu des femmes ne varie pas selon les branches économiques.

A partir de l'estimation de revenu des deux secteurs, secteur de travail indépendant et de travail salarié, nous trouvons que le revenu estimé des salariés hommes dans les deux secteurs est plus élevé que celui des travailleurs indépendants. Ceci implique que les salariés ont un avantage en ce qui concerne le revenu dans tous les deux secteurs, que ce



soit dans quel secteur, les salariés gagnent plus que les travailleurs indépendants. Nous faisons une simple décomposition de l'écart de revenu chez les salariés et travailleurs indépendants selon la méthode de Blinder (1973) et de Oaxaca (1973). Le résultat montre que l'écart de revenu des travailleurs dans les deux secteurs est expliqué par des déterminants inobservables dans le modèle.

Après avoir calculé l'écart des revenus attendus dans les deux secteurs, nous l'introduisons dans l'équation de participation comme une variable explicative. L'écart positif signifie que le revenu estimé du travail indépendant d'un individu est plus important que son revenu estimé du travail salarié. L'impact positif de l'écart de revenu sur la probabilité d'entreprendre implique que la différence de revenu est une motivation du choix d'occupation.

Les résultats montrent que l'effet des variables varie selon le sexe des travailleurs. L'écart de revenu attendu affecte positivement le choix des hommes. Tandis que chez les femmes, les gains monétaires semblent ne pas être l'objectif primordial. L'effet significatif des facteurs financiers chez les hommes devient non significatif chez les femmes. Nous trouvons que l'effet de l'expérience est positif et fortement significatif pour l'homme et la femme même si le facteur capital est inclus dans le modèle. Ceci explique dans une certaine mesure que l'accumulation du capital humain constitue un déterminant important du choix du travailleur. Le niveau d'éducation exerce un impact négatif sur le choix des travailleurs mais significatif seulement pour les hommes. Nos résultats sont conformes aux conclusions de Le (1999), l'impact du niveau d'éducation sur le choix devient négatif quand le statut d'occupation est introduit dans le modèle.

Le coefficient de certaines proxy du statut d'occupation est positif et significatif. Ceci implique que la probabilité de créer une petite entreprise est plus élevée dans certains secteurs d'activité à savoir : commerce, restaurant, transport.

TABLEAU. 1.10 – Résultat récapitulatif du chapitre 2  
Effet marginal des caractéristiques des travailleurs sur la probabilité de choisir le travail indépendant au lieu de travail salarié.

Caractéristiques des travailleurs	Homme	Femme
Ecart du revenu potentiel	+	-
Age	+	+
Niveau d'éducation	-	Non
Formation professionnelle	-	-
Enfant à charge	Non	+
Propriétaire immobilier	+	Non
Autres revenus	-	Non
Région économique (Plusieurs variables dichotomiques)	Oui	Oui
Secteur d'activités (plusieurs variables dichotomiques)	Oui	Oui

### 3.2 Les facteurs qui déterminent la performance des micro entreprises

Suite aux analyses concernant les déterminants de l'offre des travaux indépendant, nous pouvons maintenant nous tourner vers la croissance des entreprises. La deuxième étude de cette thèse, le **chapitre 3**, est consacrée à étudier les facteurs qui influencent la performance des micro et petites entreprises au Vietnam. Par le terme performance, on peut penser à plusieurs concepts tels que l'efficacité de la production, le rapport coût-efficacité, le taux de croissance du chiffre d'affaires, du nombre de travailleurs etc. Dans le cadre de notre étude, nous utilisons un concept qualitatif de performance qui permet de classer les entreprises selon "l'état de croissance" de leur chiffre d'affaires par rapport à celui des deux années précédentes : les entreprise dont le chiffre d'affaires est "croissant", "décroissant" ou "inchangé". Il serait évidemment préférable de traiter la question avec une mesure de performance plus quantitative mais le problème souvent rencontré dans les pays en voie de développement - le manque des statistiques, ne permet pas de réaliser notre ambition. Vu notre concept de performance, dans le cadre de cette thèse, sauf autre explication complémentaire, le terme performance sera utilisé de façon équivalente au terme croissance.

La relation entre la performance de l'entreprise et ses caractéristiques génère un grand

nombre de recherches théoriques et empiriques dans la littérature de l'économie et du management. En premier lieu, il faut rappeler de la fameuse loi de Gibrat (Gibrat, 1931) qui stipule que la croissance est un processus aléatoire et qu'il n'y a donc pas de relation entre la taille initiale de l'entreprise et sa croissance au cours d'une période. Si les entreprises ont la même probabilité de croître, l'écart absolu entre des petites et les grandes entreprises aura tendance à se creuser. Il n'y aura pas de "convergence" entre les plus grandes entreprises et les plus petites. De nombreuses analyses empiriques ont cherché à confirmer ou infirmer cette loi de Gibrat (pour une synthèse, cf. Sutton, 1997). Les résultats empiriques montrent que la cette loi ne peut être appliquée telle quelle mais il faut ajouter plusieurs conditions et qu'une tendance de "rattrapage" des grandes par les plus petites entreprises de différents secteurs d'industrie est observée dans plusieurs études (Lotti et al., 2003).

## **Les déterminants de la performance de l'entreprise**

### *Taille de l'entreprise*

Sur le plan théorique, l'impact de la taille de l'entreprise sur sa performance se propage *via* des voies différentes. Les grandes entreprises peuvent diversifier leurs capacités pour exploiter l'économie d'envergure. Ceci permet aux grandes entreprises de générer plus d'efficacité et donc plus de performance que les petites (Audretsch, 2006). Néanmoins, les petites entreprises sont plus flexibles en ce qui concerne à la fois la localisation géographique et la capacité à s'adapter aux changements de l'environnement économique. Les études empiriques sur un échantillon d'entreprises survivantes pendant la période observée aux Etats Unis par Evans (1987a, b) et Audretsch (1995), montrent que la taille de l'entreprise est négativement corrélée à leur taux de croissance pour les petites et moyennes entreprises (PME). Sur un échantillon des entreprises fabriquant des ordinateurs en Inde, Das (1995) trouve un résultat similaire. Toutefois, une corrélation positive apparaît dans certaines études rapportées par Hesmati (2001). Dans une des rares recherches sur la croissance des PME au Vietnam, Hansen et *al.* (2004) trouvent que la

taille est négativement corrélée au taux de croissance de l'entreprise.

### *Age de l'entreprise*

En ce qui concerne l'âge de l'entreprise, il est largement accepté que les "old firms" possèdent plus d'expériences et sont donc plus performantes que les jeunes entreprises. De l'autre côté, elles sont moins flexibles que les jeunes face aux changements sur le marché. Par conséquent, il est fortement conseillé de ne pas évaluer la relation entre l'âge de l'entreprise et sa performance en référant exclusivement aux arguments théoriques. En effet, les recherches empiriques confirment cette suggestion. Jovanovic (1982), Evans (1987a, b), Ericson et Pakes (1995) montrent que la relation en question est négative. Tandis que Das (1995) trouve le résultat opposé. Selon Hesmati (2001), cette relation est sensible au concept de performance. En contrôlant par le taux de croissance des employés, il trouve que l'âge de l'entreprise a un effet négatif sur la performance. En revanche, en utilisant le taux de croissance du chiffre d'affaires ou de l'actif, cet effet devient positif. Sur un échantillon d'entreprises indiennes, Majumdar (1997) trouve que l'âge de l'entreprise affecte négativement sa rentabilité mais positivement sa productivité. Dans l'étude de Hansen et *al.* (2004) sur les PME au Vietnam, l'âge semble être sans rapport avec la performance de l'entreprise.

L'ambiguïté dans les résultats, selon Majumdar (1997) peut être causée par l'omission des caractéristiques institutionnelles dans les recherches. Pour cette raison, il est important d'incorporer d'autres facteurs dans l'analyse des déterminants de la performance de l'entreprises.

### *Statut juridique*

Le statut juridique de l'entreprise semble jouer un rôle important sur la performance de l'entreprise. Chaque forme juridique dispose d'atouts certains, mais également de contraintes non négligeables. Le choix du statut juridique de l'entrepreneur reflète l'évaluation de risque encouru par le porteur du projet, le mode de transfert et de financement de son entreprise (Harhoff (1998)). Chaque statut juridique correspond à un coût différent et le choix du statut est considéré comme un problème de minimisation de coût.

L'impact empirique du statut juridique de l'entreprise sur sa performance semble assez ambigu. Dans une étude sur un échantillon de 10000 entreprises allemandes dans 4 secteurs : construction, transformation, commerce et services, Harhoff (1998) trouve que les entreprises à responsabilité limitée (limited liability entreprises) ont une meilleure performance par rapport les autres. Néanmoins, sur un échantillon d'entreprises dans le secteur des services, Nguyen (2004) montre que le statut juridique est sans rapport avec la performance de l'entreprise. Pour le cas des pays en voie de développement, là où l'économie informelle est un phénomène assez courant, l'impact du statut informel de l'entreprise est évidemment crucial pour les chercheurs et les autorités. Le statut informel s'accompagne de certains obstacles<sup>12</sup>, à savoir manque de capital humain, utilisation de technologies obsolètes, accès limité au crédit et aux supports de l'Etat etc., nuisant à la croissance et la performance de l'entreprise.

### *Accès au financement*

L'accès au financement est souvent considéré comme un facteur crucial de la croissance des entreprises. Pourtant, l'étude de Brown et *al.* (2004) montre que le rôle de l'accès au crédit devrait être révisé pour le cas des pays en transition. Il montre que le niveau du développement de l'environnement institutionnel pourrait exercer plus d'effet sur la croissance des entreprises que l'accès au crédit. De ce fait, il est important d'évaluer empiriquement le rôle de l'accès aux ressources financières. Des résultats sur 5 pays en transition similaires à ceux de Brown sont reportés dans les études de Johnson et *al.* (2000). Cependant, des conclusions opposées sont trouvées dans l'étude de Pissarides et *al.* (2003). Cette diversité dans la littérature semble être conforme à la déclaration de Majumdar cité ci-dessus.

### *Caractéristiques de l'entrepreneur*

A côté des caractéristiques de l'entreprise, celles de l'entrepreneur jouent aussi un rôle important dans la performance de l'entreprise, surtout des PME. Selon Parker (2004) ,

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12. Voir Morrisson (1995), Arimah (2001), and Klein (2003), Yu (2002), Ishengoma (2005), Loayza (1997), Levenson and Maloney (1998) and Jackle and Li (2003) pour plus de détails sur les obstacles du secteur informel.

l'attitude et les capacités de l'entrepreneur se reflètent dans les choix stratégiques et dans la manière dont il gère son entreprise. Intuitivement, un niveau d'études élevé devrait avoir un effet positif sur la croissance de l'entreprise. Les résultats empiriques ne nous donnent pas une réponse précise à ce sujet. Burki et Terrel (1998) trouvent que l'entreprise dont le propriétaire a un niveau d'éducation plus élevé est plus efficace. De l'autre côté, les résultats de Brown et *al.* (2004) sur les petites entreprises en Roumanie, montrent que l'effet du niveau d'éducation sur la croissance est très faible. Pour le cas des pays en voie de développement, Nichter et Goldmark (2008) indiquent que si on tient compte du niveau d'éducation moyen du pays, le niveau d'éducation de l'entrepreneur exerce un effet positif sur la croissance de l'entreprise.

En général, les femmes chefs d'entreprises sont souvent considérées comme ayant moins d'opportunités d'accumuler de l'expérience, comme ayant un réseau de contacts professionnels moins étendu et comme ayant plus de difficulté dans la mobilisation des ressources. De plus, les femmes s'orientent plus vers leur famille et sont moins ambitieuses en ce qui concerne l'agrandissement de leur entreprise. Etant donné ces arguments théoriques, ces caractéristiques des femmes ont sans doute un impact négatif sur la croissance de l'entreprise. En effet, les données empiriques montrent que le fait d'être une femme génère un effet négatif sur la performance, sans que toutefois cela mette en cause la survie de leur petite entreprise (Cooper et *al.*, 1994).

### ***Localisation et secteur d'industrie***

Des facteurs contribuant également à la performance de l'entreprise, tels que la localisation et le secteur d'industrie, sont souvent introduits dans les modèles empiriques sur le développement de l'entreprise. Les recherches précédentes montrent que la performance de l'entreprise varie considérablement selon les secteurs. Le taux de croissance dans les secteurs qui se caractérisent par un niveau élevé d'économies d'échelle est plus important que celui des autres secteurs (Audretsch, 1995). Le rôle de l'emplacement de l'entreprise est particulièrement abordé dans l'étude de Liedholm (2002), il indique que les entreprises situées dans les zones urbaines ont une probabilité de survie plus élevée.

Dans celle de Najib (2005), les entreprises dans les gros centres urbains connaissent un taux de croissance plus important.

Les études présentées montrent que l'impact de différents facteurs sur la croissance de l'entreprise ne devrait pas être étudié en se référant exclusivement à l'expérience des pays développés. Tenant compte des différences dans l'environnement institutionnel entre les pays, des différences dans la nature des industries etc. la croissance des entreprises subira un niveau d'impact différent d'un même facteur. Par conséquent, notre étude empirique vise à étudier l'impact des facteurs souvent abordés dans la littérature sur la performance des micro et petites entreprises au Vietnam. Notons qu'il est plus facile de trouver une recherche portant sur les déterminants de la croissance de l'entreprise des pays développés. Tandis que la nature et le parcours des entreprises dans pays en voie de développement pourrait être différent. Dans pays développés, les petites entreprises jouent souvent un rôle important dans l'introduction de nouveaux produits, de nouvelles technologies au marché en créant des innovations. Par contre, dans les pays en voie de développement, les petites entreprises sont considérés dans la plus part de cas comme un moyen de survie, un moyen d'échapper le chômage. Vue la différent dans le motif d'entrée dans le secteur de travail indépendant, l'effet de l'âge, du niveau d'éducation et plusieurs autres variables sur la croissance, la performance ou la survie de micro entreprises dans les pays en voie de développement pourrait être différent par rapport à celui dans les pays développés. Ainsi, nos travaux constituent un plus dans la littérature des entreprises aux pays en voie de développement.

## **Méthodologie et résultats**

Les entreprises dans notre étude sont tirées de l'enquête VHLSS 2004 et sont les micro et petites entreprises de différents secteurs d'activité. Ces entreprises contribuent d'ores et déjà à une part importante des emplois sur le marché de travail. Avec leur croissance dynamique, elles constituent également une force non négligeable dans la croissance de

l'économie du Vietnam au cours des dernières années.

### ***Méthodologie***

Nous utilisons le modèle de logit multinomial dans lequel les facteurs susceptibles d'avoir un effet sur la performance sont introduits comme variables explicatives. Notre indicateur est construit comme la variation du chiffre d'affaires de l'entreprise par rapport au résultat obtenu 2 ans avant. Nous distinguons ainsi 3 modalités d'évolution : croissant (49%), décroissant (15%) et inchangé (36%). Ces trois modalités constituent la variable de performance à expliquer. Conformément à la nature du modèle de logit multinomial, une des 3 modalités de croissance de l'entreprise sera utilisée comme modalité de base et les autres sont comparées avec cette base. Nous choisissons la modalité "inchangé" du chiffre d'affaires de l'entreprise comme base. En conséquence, deux séries d'estimation sont faites pour le couple "croissant-inchangé" et "décroissant-inchangé". De ce fait, le signe positif d'un coefficient d'une variable explicative dans l'estimation du couple "croissant-inchangé" exprime l'impact positif de la variable correspondant sur la probabilité d'être en situation de croissance. Pour le couple "décroissant -inchangé", le signe positif d'une variable explicative représente l'impact négatif de la variable concernée sur la situation de croissance de l'entreprise. Ce qui veut dire que l'impact de la variable en question augmente la probabilité d'être dans la pire des situation de croissance de l'entreprise - la "décroissance".

### ***Résultats***

Deux variables mesurant **la taille de l'entreprise** sont utilisées : le revenu en log (Income) et le nombre de travailleurs réguliers de l'entreprise (Size). Les résultats obtenus montrent que la taille de l'entreprise mesurée par son revenu génère un effet positif sur la performance de l'entreprise. Néanmoins, en ce qui concerne le nombre de travailleurs, l'interprétation de l'effet sur la situation de croissance de l'entreprise est plus compliquée. Dans la paire "croissant - inchangé", le coefficient de la variable (Size) est positif et significatif dans l'estimation où le niveau de revenu (Income) est omis. Le coefficient devient non significatif dans l'équation si l'on y incorpore le revenu de l'entreprise. Dans



la paire “décroissant - inchangé”, le coefficient devient positif et significatif. Ce résultat implique que pour ce couple “décroissant - inchangé”, le nombre de travailleurs exerce un impact négatif sur la performance de l’entreprise. La non-convergence dans le résultat suggère que pour les micro et petites entreprises, le nombre de travailleurs est une mesure très sensible de la taille de l’entreprise.

Contrairement à la taille de l’entreprise, l’effet de **l’âge** sur la performance de l’entreprise est plus stable. Les jeunes entreprises ont tendance à avoir une meilleure performance par rapport aux entreprises vieillissantes. Le rôle de l’emplacement sur la performance de l’entreprise ne correspond pas à celle que l’on attendait. Le fait de se situer dans les zones urbaines et les grands centres d’économie affecte négativement la situation de croissance de l’entreprise. Nous ne trouvons pas l’impact significatif du statut juridique sur la performance de l’entreprise sur le couple “croissant - inchangé” ; pourtant le résultat obtenu pour le couple “décroissant - inchangé” est assez étonnant : les entreprises informelles ne sont pas celles qui correspondent à la pire situation de croissance. La probabilité d’être dans la situation décroissante diminue quand l’entreprise est informelle. L’accès au crédit ne joue non plus aucun effet sur la performance de l’entreprise. Ceci confirme l’idée de Brown et *al.* (2004) que dans les pays de développement, l’accès au crédit pourrait ne pas être un facteur primordial de la croissance de l’entreprise.

Quant aux caractéristiques de l’entrepreneur, nos résultats indiquent qu’un **niveau d’éducation** plus élevé n’entraîne pas une meilleure performance. Au contraire, le fait d’avoir un diplôme de l’enseignement supérieur provoque une augmentation de la probabilité d’être dans la situation de croissance défavorable. Selon Alvarez et Crepsi (2003), ce résultat pourrait être dû au fait que les entrepreneurs ayant un niveau d’éducation élevé sont attirés par plusieurs activités et consacrent moins d’effort au management de leur entreprise. Le fait que l’entreprise est gérée par une femme semble ne pas constituer un handicap. En effet, les résultats montrent que la probabilité de se trouver dans la situation décroissante diminue quand l’entreprise est gérée par une femme. Pour le groupe “croissant - inchangé”, aucune différence entre la performance des entreprises gérées par

un homme ou par une femme n'est révélée.

TABLEAU. 1.11 – Résultat récapitulatif du chapitre 3  
Effet marginal des variables explicatives sur la probabilité d'avoir la meilleure performance dans le couple de performance de l'entreprise étudié.

Caractéristiques	Croissant/inchangé*	Décroissant/inchangé*
Taille	+	+
Grandes villes	-	-
Age de l'entreprise	Oui	Oui
catégorie de l'entreprise	Non	oui
Niveau d'éducation de l'entrepreneur	Oui	Non
accès au crédit	Non	Non
Zone urbaine	-	-
Fonctionnement à temps plein	Non	+
Homme	Non	-
Secteur d'activités	Oui	Oui
Régions économiques (plusieurs dummy)	Oui	Oui

\* : les entreprises ayant le chiffre d'affaires croissant, décroissant ou inchangé.

### 3.3 Hétérogénéité des micro entreprises face aux contraintes sur leur croissance

On trouve fréquemment dans les recherches empiriques sur un échantillon d'entreprises provenant de plusieurs pays que l'effet des facteurs sur la survie, la croissance ou la performance des entreprises varie selon les pays. Cet effet non homogène pourrait être causé soit par le niveau de développement différent des pays, soit par la différence de comportement d'entreprises différentes. Nos résultats sur les déterminants de la performance de l'entreprise nous permettent de prolonger cette vision de l'hétérogénéité des entreprises face aux contraintes sur leur croissance. Le **chapitre 4** est consacré à une analyse approfondie de l'impact des caractéristiques de l'entreprise sur le degré de contrainte de croissance auquel l'entreprise doit faire face durant l'évolution.

## Les obstacles à la croissance

Dans la littérature de l'entrepreneuriat, les facteurs qui affectent la création, la croissance et la performance des entreprises sont souvent divisés en trois groupes : les caractéristiques des entreprises, celles des entrepreneurs et l'environnement où fonctionnent les entrepreneurs et les entreprises.

### *Barrière financière et réglementation*

Les facteurs environnementaux ayant un effet sur la performance de l'entreprise recouvrent souvent les conditions du marché financier et des autres marchés, le niveau de développement de l'infrastructure et du cadre judiciaire, et l'application des règles et des institutions (Pissarides et al., 2003). La réglementation reflète les conditions concernant la concurrence sur les marchés en termes de barrières tarifaires et non tarifaires, la production et la commercialisation des biens au regard de la santé et de l'environnement, la protection des travailleurs. Ces conditions visent à assurer des objectifs peu compatibles : le profit des entreprises ainsi que le bien-être des consommateurs et des travailleurs (Adair, 2009). Par conséquent, le fardeau réglementaire exerce sans doute des effets sur le développement de l'entreprise. L'effet des contraintes financières sur la croissance et la performance implique la barrière à l'accès au crédit. Les résultats empiriques de Rajan et Zingales (1998) à partir d'un large échantillon des pays montrent que les entreprises ayant besoin de financement externe ont tendance à se développer plus lentement dans les pays où le marché financier est moins développé. Des résultats similaires sont trouvés par Pissarides et al. (2003) sur un échantillon de PME en Russie et Bulgarie. Pourtant, dans leur étude sur cinq pays en transition, Johnson et al. (2000) montrent que l'absence du financement externe n'empêche pas l'entreprise d'investir et que l'entreprise pourrait remplacer le financement externe par un financement interne. L'effet moins important du financement externe sur la croissance de l'entreprise est également prouvé dans les recherches de Johnson et al. (1999) et Brown et al. (2004). Brown et al. (2004) montrent que, pour les pays en transition, certains aspects de l'environnement institutionnel à savoir les droits de propriété, l'efficacité des règlements, la mise en

application des contrats (contract enforcement), pourraient jouer un rôle plus important sur la croissance des PME que l'accès au crédit.

### ***Environnement socio-économique***

A l'égard des autres facteurs concernant les contraintes de l'environnement socio-économique, Covin et Slevin (1989) montrent que les facteurs de l'environnement externe comme le cadre juridiques et l'application des règlements, pourraient exercer des impacts importants sur la viabilité, la croissance et la performance de l'entreprise. Ils trouvent également que la performance des PME est positivement liée à "l'orientation entrepreneuriale" (OE) de l'entrepreneur. Celle ci est démontrée par le fait que l'entrepreneur est prête à quel point à prendre des risques lié à l'entreprise, à favoriser le changement et l'innovations afin d'obtenir davantage compétitivités et rivaliser plus et concurrencer plus dynamiquement avec les autres entreprises. Elle est fortement influencée par l'environnement socio-économique de l'entreprise. L'étude de Wiklund (1999) révèle aussi la relation positive entre l'OE et la performance de l'entreprise. Il est important d'ajouter que les travailleurs indépendants n'ont pas tous une orientation entrepreneuriale : celle ci suppose des actions innovatrices, risquées et proactives. Par conséquent, les déterminants de l'OE constituent une piste de recherche importante dans la littérature de l'entrepreneuriat. Dickson et Weaver (2008) présentent un cadre théorique pour analyser l'impact de l'environnement institutionnel sur l'évolution de l'orientation entrepreneuriale. Ils indiquent que le choix de l'OE est significativement motivé par le système juridique et les forces de règlement de l'environnement institutionnel.

### ***Développement de l'infrastructure***

En général, on considère qu'il existe une relation entre le développement de l'infrastructure et la croissance économique. Le développement de l'infrastructure est souvent considéré comme un outil pour baisser les coûts de transport ou de production et pour favoriser l'accès au marché. En utilisant un panel de pays de 1952 à 1990, Canning et Pedroni (2008) montrent que le développement de l'infrastructure entraîne la croissance à long terme et que son effet sur la croissance varie à travers les pays. Des résultats similaires

sont trouvés dans une recherche empirique de Egert et al. (2009) qui mettent l'accent sur le rôle de l'infrastructure physique, à savoir transport, électricité, télécommunication dans la croissance économique sur un échantillon de pays de l'OCDE.

## **Méthodologie et résultats**

A partir de la littérature sur les déterminants de la croissance et la performance des entreprises, nous présentons dans ce chapitre une analyse empirique sur l'hétérogénéité des micro et petites entreprises face aux barrières qui s'opposent à leur croissance. Nous utilisons en particulier la section 10 de l'enquête VHLSS 2004 dans notre étude. Dans cette section, on demande aux entreprises de classer les dix sept facteurs qui entravent leur croissance selon un échelonnement prédéfini, entre autres : électricité, service postal et de communication, accès au crédit, impôt, enregistrement, ressources humaines, corruption et compétition déloyale et etc. Ces facteurs représentent plusieurs aspects mesurant le degré de contrainte causé par l'environnement socio-économique dans lequel l'entrepreneur et l'entreprise opèrent.

### ***Méthodologie***

Des analyses descriptives sur les réponses nous montrent que les entreprises ne s'exposent pas de même manière en fonction des facteurs. Certains facteurs nuisent les activités de l'entreprise plus que les autres. Une partie assez importante des entrepreneurs semble ne pas s'intéresser à l'environnement dans lequel leur entreprise fonctionne. Le nombre des entreprises qui subissent de sévères obstacles provenant de l'environnement économique est très faible. Ces résultats nous empêchent d'utiliser directement la classification des obstacles de la croissance sous forme de variable expliquée ordinaire ou même nominale.

De plus, étant donné que les contraintes rencontrées par les entreprises dans l'enquête sont mesurées par dix sept facteurs, elles s'articulent en général autour des principaux axes à savoir infrastructure, régulation de l'Etat, conditions sociales etc. Ainsi, les facteurs peuvent être regroupées pour construire un indice plus général mesurant la hauteur

d'un obstacle "synthétique". De fait, nous faisons une analyse en composantes principales (ACP) sur ces dix sept aspects et retenons finalement 4 composantes renommées "Infrastructure", "Institution", "Fin-tax-License" et "Social-instability". Au lieu de dix sept variables, l'ACP nous permet d'avoir quatre composantes constituant quatre variables continues. Ces variables sont introduites dans un modèle simple comme variable expliquée. Les variables explicatives sont les caractéristiques de l'entreprise. Ainsi, le hauteur de l'obstacle auquel l'entreprise doit faire face est expliqué par ses caractéristiques. Cette analyse nous permet de décrire le profil des entreprises qui présente plus de plaintes sur l'environnement économique et par conséquent pourrait être utile dans le ciblage des soutiens aux micro-entreprises. Notre approche est similaire à celles de Sleuwaegen et Goedhuys (2002) sur une échantillon d'entreprises Ivoiriennes, de Pissarides et *al.*(2003) sur une échantillon de PME en Russie et Bulgarie, de Robson et Obeng (2008) pour les entreprises du Ghana, de Coad et Tamvada (2008) pour des entreprises en Inde et de Moghal et Pfau (2008) sur les entreprises pakistanaïses. Toutefois, comme nous l'avons abordé au-dessus, nos données sur le hauteur des obstacles ne nous permettent pas de les utiliser telles quelles, nous devons les transformer en variables continues par le méthode ACP et les introduire dans les régression de MCO au lieu de faire un logit multinomial ou un logit ordinaire comme d'autres chercheurs l'ont fait. Cette méthode n'entraîne pas de changement dans l'interprétation du résultat.

Nous divisons les entreprises dans notre échantillon en trois groupes selon la modalité de croissance de leur chiffre d'affaires : les entreprises dont le chiffre d'affaires est "croissant", "décroissant" et "inchangé". Les analyses descriptives de la distribution des réponses nous indiquent que le hauteur des obstacles varie selon la modalité de croissance de l'entreprise. En moyenne, les entreprises "croissantes" expriment des plaintes plus sévères à l'égard des obstacles à la croissance que les autres. Nous supposons ainsi que la modalité de croissance de l'entreprise pourrait exercer un impact particulier sur l'évaluation des obstacles à la croissance. De plus, nous voulons également mesurer la différence causée dans le degré de contrainte selon les modalités de croissance. Par conséquent, les

régressions sont faites séparément selon les modalités de croissance de l'entreprise.

### ***Résultats***

Nos résultats sont présentés en fonction de chaque composante des obstacles à la croissance. En ce qui concerne la première composante construite par des obstacles institutionnels, que nous dénommons "*Institution*", nous trouvons que l'impact des variables varie fortement selon les modalités de croissance de l'entreprise. La taille de l'entreprise n'exerce aucun impact sur la hauteur de l'obstacle auquel l'entreprise doit faire face. Par contre, l'âge, l'emplacement géographique et le secteur d'activité jouent un rôle important dans la variation du niveau de contrainte. Pour le groupe "inchangé", il semble que les entreprises plus jeunes rencontrent plus de difficultés liées aux contraintes institutionnelles. Les coefficients dans les deux autres groupes ne sont pourtant pas significatifs. Les entreprises du secteur des services déclarent un niveau d'obstacle moins important par rapport celles du commerce et de l'industrie.

À propos des contraintes causés par l'accès au crédit, le coût de crédit, les problèmes de taxe et de licence, que nous dénommons "*Fin-tax-license*", les résultats montrent que la taille de l'entreprise joue un rôle particulièrement important. Plus l'entreprise est grande, plus est sévère le niveau de contrainte auquel elle doit faire face. Il faut préciser que nos entreprises sont toujours des micro et petites entreprises. Les entreprises dont la taille est très petite sont en fait incapables d'approcher les canaux de crédit officiels et ainsi ne cherchent pas ce mode de financement. En conséquence, les entreprises plus grandes, qui peuvent approcher les sources de financement externe, annoncent plus de difficultés en les demandant. Ce résultat est confirmé par l'effet significatif du statut juridique sur le niveau d'obstacle. Les entreprises formelles se plaignent plus par rapport aux entreprises informelles. Les entreprises jeunes dans le groupe "croissant", annoncent également un niveau de contrainte plus sévère. Ceci implique, dans une certaine mesure, que les entreprises jeunes pourraient s'intéresser plus à la croissance et dont avoir besoin de plus de financement externe et avoir plus de préoccupation à l'égard des problèmes de taxe et licence. Le niveau de contrainte varie également beaucoup selon l'emplacement

de l'entreprise. Pour certaines zones économiques, le degré d'obstacle est plus sévère.

La troisième composante des contraintes de l'environnement socio-économique est l'instabilité de la société, que nous appelons "*Social-instability*". Nous trouvons que les entreprises plus jeunes rencontrent moins de difficultés concernant la criminalité, le manque de sécurité, la concurrence déloyale. L'emplacement joue aussi un rôle important dans la détermination de la hauteur des obstacles. Les résultats empiriques montrent que les entreprises de la région économiquement la plus développées, rencontrent plus de difficultés causées par l'instabilité de la société. Ceci pourrait impliquer que le degré de compétition dans les grandes agglomérations est plus sévère, et rend plus de difficultés au développement de l'entreprise. Les entreprises du secteur commercial présentent plus de plaintes contre l'instabilité sociale par rapport à celles des deux autres secteurs.

En ce qui concerne les contraintes ressenties du fait de l'infrastructure physique (électricité, services de communication et transport) (*INFRA*), les résultats montrent que l'impact de la taille de l'entreprise (mesurée par le volume du chiffre d'affaires), sur le niveau de contrainte à la croissance est positif et significatif. Les entreprises plus grandes affichent plus de plaintes concernant les 'infrastructure. Par rapport aux plus vieilles, les entreprises plus jeunes manifestent plus de soucis à l'égard des infrastructures. L'emplacement et le secteur d'activité influencent également la hauteur d'obstacle évaluée par les entreprises. L'impact du secteur d'activité sur le niveau de plainte correspond à notre attente. Les entreprises utilisant plus les infrastructures dans leurs productions manifestent plus de plaintes.

Bien que les micro entreprises fonctionnent dans des conditions de travail précaires et génèrent une basse productivité, le taux des entreprises déclarant d'avoir des difficultés dans leurs activités n'est pas aussi important que celui attendu. De plus, ceux sont les plus grandes entreprises, en ce qui concerne la taille, et les entreprises formelles qui se plaignent plus des barrières de la croissance. Le fait que les plus grandes entreprises sont plus ambitieuses que les plus petites pourrait être l'hypothèse qui se cache derrière ce phénomène. Les plus grandes entreprises fonctionnent dans une échelle plus large du



marché et doivent utiliser plus de l'infrastructure, recourir plus souvent aux services publics et autres services de soutien aux activités de l'entreprise. Etant plus ambitieuse, la croissance, performance et l'élargissement deviennent l'intérêt majeur de l'entreprise au lieu de l'existence. C'est pour cette raison, les plus grandes entreprises expriment plus des préoccupations au sujet des difficultés dans les activités de l'entreprise. Ces préoccupations montrent également le fait que la création d'une micro entreprise n'est pas seulement une solution contre le chômage pour les une mais un choix volontaire avec des ambitions pour les autres.

Vue le rôle des micro entreprises dans la création d'emploi et d'une environnement économique dynamique, il est nécessaire d'avoir des politiques visant à promouvoir la croissance des micro entreprises d'une part, d'autre part, ces politiques devrait prendre en compte de l'hétérogénéité des entreprises. Le " one size fits all " politique ne serait pas convenable étant donné que les différents catégories de micro entreprises rencontrent différentes difficultés. Les supports de l'Etat vis à vis des micro entreprises apportent des bénéfices non seulement aux entreprises, qui pourraient avoir les conditions de travail améliorées et plus encadrées, avoir des soutiens mieux adaptés à leurs besoins, et donc une hausse de productivité, mais aussi à l'Etat, qui pourrait mieux protéger ses travailleurs et augmenter sa recette fiscale.

TABLEAU. 1.12 – Résultat récapitulatif du chapitre 4  
Effet des caractéristiques de l'entreprise sur la hauteur des contraintes .

Caratéristique	Obstacle			
	Institution	Tax-Fin-License	Social instability	Infrastructure
<b>Croissance</b>	+	+	+	+
Taille	Non	+	Non	+
Enregistrement	Non	+	Non	Non
Accès au crédit	Non	Non	+	Non
Zone rurale	Non	Non	Non	Non
Mono-activité	Non	Non	Non	Non
Fonctionnement à temps plein	Non	Non	Non	6
Age (dummy)	Oui	Oui	Non	Oui
Région économique*	Oui	Oui	Oui	Oui
Secteur d'activité*	Oui	Non	Oui	Oui
<b>Inchangé</b>	-	-	-	-
Taille	Non	+	Non	+
Enregistrement	Non	+	Non	Non
Accès au crédit	Non	Non	Non	Non
Zone rurale	Non	Non	Non	Non
Mono-activité	Non	Non	Non	+
Fonctionnement à temps plein	Non	Non	-	Non
Age *	Oui	Non	Non	Non
Région économique*	Non	Oui	Oui	Oui
Secteur d'activité*	Oui	Oui	Oui	Oui
<b>Décroissance</b>	+	-	+	-
Taille	Non	+	Non	+
Enregistrement	Non	+	Non	-
Accès au crédit	Non	Non	Non	Non
Zone rurale	Non	Non	Non	+
Mono-activité	Non	Non	Non	-
Fonctionnement à temps plein	Non	Non	Non	Non
Age*	Non	Oui	Oui	Non
Région économique*	Oui	Oui	Oui	Non
Secteur d'activité*	Oui	Oui	Non	Oui

\*Plusieurs variables dichotomiques



# Chapitre 2

## Occupational choice between self-employment and salaried employment

### 1 Introduction

The economic reform has seen private entrepreneurship emerge as one of the main forces behind the rapid decline in poverty and growth acceleration in Vietnam. According to a report carried out by World Bank in 2005, nearly every households in Vietnam have run a non farm business of one kind or another<sup>1</sup>. These small enterprises have constituted an effective tool in combating unemployment and creating welfare. Alongside the vast number of household businesses, the unofficial ones in particular, there has been a boom in the number of registered enterprises; the number of private formal enterprises quadrupled between 1999 and 2005. Survey analysis show that many registered firms have been "upgraded" from household businesses while others have been registered by people working illegally or unofficially in the same industry for years.

In perspective, the development of small successful businesses will provide for the

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1. It should be note that this estimation includes all non-farm self employment activities regardless of how significant they may be and also includes non farm activities of farm households in low season.

beginning of giant corporation. Many policies, aimed at encouraging the development of private entrepreneurship, have been carried out in Vietnam in recent years. The provision of better knowledge in this sector, has allowed policy makers to give more suitable support in promoting the growth of private business, therefore this sector has attracted many researchers. However, in spite of paying much attention to this business sector, the question of who are the business leaders remains an under-researched area in the case of Vietnam. The characteristics of the self-employed and the motivation behind self-employment have been widely mentioned in economic literature. Nevertheless, most of these studies have been carried out on the self-employed population of industrialized countries, whilst in the case of developing countries it may need to be interpreted differently.

We acknowledge that, the determinants of self-employment in Vietnam have been briefly reported in the research of Vijverberg and Haughton (2002). They draw more attention to the survival and growth of household enterprises, than the important factors which determine self-employment. By using most the recent survey data in the household living standards of 2004, this chapter aims at providing more detailed discussions on the determinants and characteristics of self-employment in Vietnam. The stress is laid upon the business leader rather than on the household, as in Vijverberg and Haughton (2002). We focus on the role of expected earnings as important motivation for self-employment and the aim of investigating business start-up constraints. In our attempt to distinguish the effect of different determinants on gender, we will examine separately the impact of these factors on each gender.

We organize our chapter as follows: Section 2 provides some background information on the labour market of Vietnam. A brief review of the literature on occupational choice will be presented in section 3. Section 4 discusses the econometric background method used throughout this chapter. In sections 5 and 6, we present a descriptive analysis of our data and our resulting estimation. Finally we conclude in section 7.

## 2 The private labour market in Vietnam

Before the transition, there was no private sector in Vietnam. The state sector, including state-owned enterprises (SOEs) and co-operatives, was the only formal employment provider. Self-employed casual workers, who were not farmers, existed; however, as they were not numerous there were no statistics<sup>2</sup>.

Faced with the increase of the socio economic crisis, the Government of Vietnam had to conduct a program of economic reforms in the late 1980s<sup>3</sup>. The private business sector, therefore, saw the light of day around 20 years ago. Since this time and with the arrival of direct foreign investment, the economic structure in general and the structure of the labour market in particular, have gradually changed.

In the first stage of the transition, the share of state employment, especially that of the SOEs, declined sharply (McCarty, 1999). In recent years, it has been rather stable and fluctuated a little below 10 per cent (GSO). One may be interested to know why the state sector has increased in recent years. In fact, the number of workers in the production section of the state sector has continued to decrease but the development of public services, such as health care and education, has absorbed many other workers. We can see the labour structure changes in the table (2.1). Contrarily, the share of non-state employment saw a rapid increase in the first years, and then stabilized. In recent years it has decreased by 3 per cent, to around 90 per cent of total employed during 2000 and 2008. It should be noted that even now, agriculture is still Vietnam's most important source of employment. The proportion of farm workers is higher in total to that of the non state employed. The foreign investment sector has captured more and more of the labour force since it started; a total of 3.7 per cent in 2008 compared with 1 per cent in 2000. The statistics in 2004 are compatible with those in VLSS-2004 which we use in this study.

Rapid economic growth has also resulted in job mobility. Some interesting information

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2. See: "The informal economic sector: Realities and problems for the management, Vietnam National University, Hanoi" for more details

3. For more details see: Tamara (2006)

Table 2.1: Employed population distribution by Ownership (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
State sector	9.3	9.3	9.5	9.9	9.8	9.7	9.11	9.02	9.07
Non-state sector	89.7	89.5	89.0	88.1	87.8	87.8	87.81	87.44	87.20
FIS	1	1.2	1.5	1.9	2.3	2.7	3.08	3.54	3.73

FIS :Foreign investment sector

Statistics from GSO, Vietnam: [www.gso.gov.vn](http://www.gso.gov.vn)

could be gained from the employment distribution by economic activities of all over the country. The share of farm employment gradually reduced, by around 10 per cent between 2000 and 2008. We can deduce that this decline was primarily due to a decrease in agricultural employment in the non-state sector because those of the state sector formed less than 1.5 per cent of the total of agricultural workers. From 1990 to 1997, the share of industrial employment stagnated at around 10 per cent. From 2000 to 2008, this sector absorbed 5 per cent more than during the previous period. It should be noted that this increase was most likely due to the development of foreign investment at this time. Foreign investors have not invested in any other areas, apart from industry and service activities. No significant increase has been found in non-state industrial employment in recent years. Nevertheless, the share of non-state and non-agricultural employment increased, mostly in the service and trade sectors. Le & al. (2001) claim that the shift of workers from other sectors to the service and trade sectors, rather than industrial sector, was caused by the lack of capital endowment and business knowledge of the Vietnamese entrepreneurs. They prefer small-scale businesses in trade and service, which do not require as much capital endowment as in industry and/or construction.

The decline in farm employment has been compensated by an increase in the share of salaried jobs; relatively minor in the state sector, but considerably higher in the private sector, including those in foreign investment. Now, household businesses, registered private domestic enterprises and companies with foreign investment provide salaried employment to more than 22 per cent of the employed population (World Bank, Vietnam business report, 2006 ).

Table 2.2: Employed population distribution by kind of economic activities (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture & forestry	62.46	60.65	58.66	56.98	55.37	53.61	51.78	50.20	48.87
Fishing	2.63	2.81	3.25	3.27	3.38	3.49	3.59	3.70	3.75
Industries*	10.34	11.05	11.54	12.28	12.73	13.50	14.30	14.84	15.50
Construction	2.77	3.35	3.86	4.16	4.62	4.70	4.93	5.13	5.33
Trade	10.36	10.54	10.84	11.17	11.46	11.60	11.80	11.98	11.96
Hotels, restaurant	1.82	1.82	1.81	1.82	1.82	1.80	1.81	1.84	1.85
Transport**	3.12	3.06	2.99	2.94	2.89	2.84	2.80	2.76	2.72
Education & training	3.60	3.67	3.79	3.90	3.99	4.06	4.17	4.25	4.31
Other services***	2.90	3.06	3.27	3.47	3.74	4.40	4.82	5.30	5.71

\*: Industries include Mining and quarrying, Manufacturing, Electricity, gas and water supply.

\*\* : Transport, storage and communication

\*\*\*: Other services include Financial intermediation, Scientific activities and technology, Real estate, renting and business activities, Public administration and defence; compulsory social security, Activities of Party and of membership organisations, Community, social and personal service activities and private household with employed persons.

Statistics from GSO, Vietnam: [www.gso.gov.vn](http://www.gso.gov.vn)

It should be noted that it is difficult to classify the status of workers in employment in Vietnam because there is a group of employees who are both self-employed as well as being salaried; also within the self-employed population, it is difficult to distinguish the self-employed farmers from the non-farm workers. The VLSS survey of 2004 reveals that 42 per cent of workers responded "yes" to the question asking whether or not they had a second job: 29 per cent had two different employment statuses.

Table (2.3) shows the distribution of workers, by employment status. Statistics for the first two years are taken from Le & al. (2001). Those of 2004 are obtained from our own calculations of VLSS 2004. In our calculations, we classify workers according to their primary job status, in other words, that which consumes most of their time.

In line with the decline in agricultural workers, the share of self-employed farmers decreased by 15 per cent between 1992 and 2004; salaried employment increased to around



Table 2.3: Employed population distribution by workers' status (%)

	1992	1998	2004
Self-employed farm	66.35	61.07	51.45
Self-employed non farm	15.75	18.45	18.63
Wage employment	17.9	19.48	29.92

Statistics for 1992 and 1998 from Le & al. (2001) ;  
for 2004 from own calculation from data of VHLSS-2004 survey, Vietnam

30 per cent. As for the self employed non-farm workers, their share rose to more than 18 per cent of the total workforce in the Vietnamese labour market in 2004.

### 3 Occupational choice literature reviews

Given the importance in the role of self-employment to the economy (De Wit, 1993), research into self-employment has received great attention since the last decade. Among many research tracks, the determinants of occupation choice between self - employed and employees have emerged as the important one<sup>4</sup>. Theoretical and empirical studies of the field marked out many determinants which have an influence on the choice between the self-employment and the salaried employment of an individual. We present in this section some main factors widely used in the model of occupational choice.

Nearly all researchers have considered the influence of educational attainment on the decision of the worker (Rees and Shah, 1986 ; Gill, 1988 ; Evans and Jovanovic, 1989 ; De Wit, 1993 , Bernhardt 1994 ). It is argued by Le (1999) that there are several channels through which educational attainment influences the possibility of being self-employed.

On the one hand, education can enhance the managerial ability of a person which facilitates entry into the self-employment sector. On the other hand a higher educational level is more favourable when looking for salaried employment, which then decreases the probability of becoming self-employed. Le (1999) also claims that the influence of the educational level on the propensity to become self-employed should be empirically rather

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4. See Le (1999) and Blanchflower and Oswald (1998) for survey of earlier research

than *a priori* considered. Empirical evidence involving this question was followed by two opposing arguments. The empirical research of Rees and Shah (1986); Borjas and Bronars (1989) and Evans and Leighton (1989), support the first argument: a more educated person has a higher probability than a lesser educated person of choosing self-employment. Nevertheless, the negative relationship between the level of education and the propensity to be self-employed is found in the studies of Evans and Jovanovic (1989); De Wit (1993); Kidd (1993); Destré and Henrard (2004). These mixed influences of educational level in making choice decisions may arise because of differences in the sampling method and the specification of the model ((Le, 1999). In the equations that control the occupational status<sup>5</sup>, the level of education has a negative impact on the possibility to become self-employed while in those without the occupational status, the impact is positive or weakly negative.

In addition to academic formation, managerial ability may also be acquired throughout the working period. It seems that knowledge accumulated during the working period is more important in making occupational choice than that during formal education because of its pragmatic characters. From this perspective, market experiences are then expected to have a positive impact on the possibility of choosing self-employment. Another interpretation of the influence of experiences on choice may be that whilst working, people accumulated not only the knowledge and skills of their field, but also the capital required to create their own business. Thus, more experienced individuals have a better possibility of choosing self-employment (Kidd, 1993). Another variable closely related to experience is age. It can be used as proxy in market experience; an older person usually has more experience given his/her training period, or as attitude toward risk, older people are less willing to take a risk and therefore less likely to become self-employed. Empirical results by Rees and Shah (1986) support this positive relation; however, Bern-

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5. The work undertaken by an individual, e.g. individuals employed in agriculture, sales, hotel, repairs, craft, managerial or professional occupations. The occupational status should be positively correlated with both educational attainment and the probability to be self-employed. The introduction or omission of these variables would modify the relationship between educational attainment and the probability to be self-employed. As the omitted variables bias the education coefficient, and do not control it, the occupational status will be positive (Le, 1999).

hardt (1994) estimates this as non-significant. The reason is likely due to the introduction of the financial capital factor in the model, alongside the work experience variable. This outcome suggests that we should consider the experience variable as a financial capital variable rather than a human capital variable.

The role of financial factors in the setting up of businesses has also drawn particular attention from researchers. Using different measures of financial capital, Evans and Jovanovic (1989) ; Kidd (1993) ; Bernhardt (1994) ; Blanchflower and Oswald (1998) and Constant and Zimmermann (2006) , have found a significant influence of liquidity constraints on the propensity to become self-employed. They all claim that financial capital is an important barrier to self-employment. It should be noted that wealth is assumed to be a barrier of entry into self-employment whilst it might be the fruit of self-employment as well. Actually, many studies have used financial endowment as a determinant of the self-employment status rather than a constraint at the moment of setting up the business; this may have biased the interpretation of the role of financial endowment as an entry barrier.

Rees and Shah (1986) study, among other factors; the influence of earnings differentials, between self-employment and salaried employment, in occupational choice. They claim that people will choose the occupation which yields the highest earning potential for them. The difference in earnings will therefore, be positively correlated with the propensity to being self-employed. Their empirical results, together with those of Bernhardt (1994); Johansson (2000); Constant and Zimmermann (2006) may support this argument.

A number of variables concerning individual and familial characteristics are also introduced in the model of choice. Marital status, the number of dependant children and the spouse's job are usually used to measure dependence, stability, attitude toward risk and even the availability of someone's financial capital.

It is likely that a married person is more prepared to take risks as their family can support them mentally during self-employment (Rees and Shah, 1986 ). However, it

is also argued that married people with children have more responsibilities, and are less willing to take risks. Among these variables, the spouse's work is evaluated as a more important determinant of occupational choice, in Le (1999). According to De Wit (1993), a person is more likely to take risks in order to get higher benefit if his/her spouse works. Empirical evidence of Blanchflower and Oswald (1998) and Bernhardt (1994) confirm this interpretation.

Family background is also considered in the research of determinants of occupational choice. Many researchers stressed on the impact of the father's job and the mother's education on the propensity of becoming self-employed. They found a significant influence of father's job on children occupation. A person would have higher probability of becoming self-employed if his father had been self-employed. However, if the father had stopped being self-employed, this would have no significant impact on the individual's decision (De Wit , 1993 ).

Certain factors such as ethnic group, race, native/immigrant group and mother tongue also play, to a certain extent, an important role in determining choice. The empirical results suggest a significant influence of ethnic groups and races on the choice of work (Borjas and Bronars, 1989). The behaviour of native/immigrant groups in the self-employment sector became a well researched field, especially in industrialized countries such as the UK, US, Canada and Australia<sup>6</sup>.

Last but not least, we want to talk about the role of attitude towards risk, in the choice of being self-employed. It is widely accepted that the returns of entrepreneurs are more variable and uncertain, than the wages of employees. The self-employed are seen as risk bearers in De Wit (1993). In his paper, he reports theoretical models of self-employment, in which the role of attitude toward risk, entrepreneurial ability, risk involving self-employment, capital requirements and taxation are considered. Brief reviews on empirical analysis, based on these models are then presented but no empirical evidence on the role of attitude towards risk is found in his survey. Later, in an excellent

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6. See Le (1999b) for more details on previous analysis

empirical survey of self-employment by Le (1999), the role of attitude towards risk is, once again, not mentioned. Cramer & al. (2002) claim that the lack of empirical tests on the role of attitude towards risk in determining entrepreneurship, is mainly due to the lack of data measuring the individual's risk attitude. They have conducted this empirical test and found that people with a lower risk aversion have a higher propensity to choose self-employment. The same results are found in Kan & Tsai (2006), who use a different measure of risk aversion.

## 4 Econometric methods

### 4.1 The model

The analysis in our study considers the behaviour of full-time workers, in the labour market, towards occupational choice. A large number of researches into occupational choice have focused on the workforces in developed countries, while in the case of developing countries, these areas are studied less. In this chapter, we apply the model widely used in the literature of choice behaviour to explain the decisions of workers in the Vietnamese labour market. Our models are similar to those of Rees and Shah ((1986), Evan and Jovanovic (1989), Bernhardt (1994), Blanchflower and Oswald (1998) , Johansson (2000), Constant and Zimmermann 2006.

At the beginning we assume that only two occupations which are available in the market are self-employment and salaried employment, and that workers are rational and know the implications of their choice. They know their own characteristics including the values of variables that are not seen by others. Thus, *ceteris paribus*, an individual chooses to work in either the self-employed or the salaried sector of the labour market which yields the highest benefits in term of utility. The utility obtained in each job is affected by the individual's characteristics and by the earnings from the two employment sectors. Let  $U_{si}$  the utility of individual  $i$  if he/she work in self-employment sector and  $U_{wi}$  in employee sector. The self-employment will be chosen if:

$$(U_{si} - U_{wi}) \equiv \alpha(\ln Y_{si} - \ln Y_{wi}) + \beta X_i + \epsilon_i > 0 \quad (2.1)$$

where  $U_{ji}(j = s, w)$  represents the utility an individual  $i$  can expect to receive from employment in sector  $j$ .  $Y_{ji}$  represents earnings from two occupational statuses and  $\alpha$  is a parameter to be estimated (it is expected to be positive).  $X_i$  is a vector of individual characteristics and variables that influence the occupational choice between self-employment and wage employment for individual  $i$ .  $\beta$  is a vector of parameters to be estimated. Lastly  $\epsilon_i$  is the error term. The function (2.1) can be written in the form of a probit model such that an individual will choose self-employment if :

$$Prob (U_{si} - U_{wi} > 0) = Prob [\alpha(\ln Y_{si} - \ln Y_{wi}) + \beta X_i + \epsilon_i > 0] \quad (2.2)$$

and

$$\epsilon_i : N(0; \sigma_i^2) \quad (2.3)$$

The major difficulty of the function (2.2) is that we only know the earnings of one person, in correspondence with her/his choice between self-employment and salaried employment, at any given time; but not both of them, so the earnings differential can not be observed. To overcome this difficulty, separate earnings equations for the employed and the self-employed are estimated to predict the individual's expected earnings in each sector. Up to this stage, the second difficulty involving the selection bias is raised from the consideration that workers in a sub-sample of self-employment or salaried employment may behave differently from the rest, in that they have the advantage of comparing the two situations and hence choose their status. In other words, the selection rule allocates individuals into sub-samples according to their greatest utility and not according to random rules. To solve the second difficulty we use the two-stage estimation methods presented by Heckman (1979) or Maddala (1986), in which the earnings equations are estimated simultaneously on a set of control variables as in the human capital Mincer model, and on selection terms calculated from reduced form probit equations. These

earnings equations are then used to predict the individual's expected earnings in each sector. The reduced form probit choice equation may be written as:

$$I^* = X_i\beta + u_i \begin{cases} \geq 0 & \text{if self-employment is chosen} \\ < 0 & \text{if wage employment is chosen} \end{cases} \quad (2.4)$$

Where  $u_i$  is error term and assumed to be normally distributed with zero mean and constant variances.  $\beta$  and  $X_i$  are similar as in function (2.2). The self-employment sector will be chosen if  $I^* > 0$  and the wage sector otherwise. The expected earnings of individual  $i$  are then:

$$E(\ln Y_{si} | Z_i, I^* > 0) = \gamma_s Z_i + \delta_s \lambda_{si} + \eta_{si} \quad (2.5)$$

$$E(\ln Y_{wi} | Z_i, I^* < 0) = \gamma_w Z_i + \delta_w \lambda_{wi} + \eta_{wi} \quad (2.6)$$

where  $Z_i$  is a vector capturing the observed influences on earnings and following Mincer type model, consist of human capital variables, personal attributes and other control variables.  $\gamma$  and  $\delta$  are vectors of parameter to be estimated.  $\eta$  is error term and  $\eta: N(0; \sigma^2)$ .  $\lambda_{si}$  and  $\lambda_{wi}$  are selection terms calculated from reduced form probit equation (equation 2.4), where:

$$\lambda_{si} = \frac{\hat{f}(-X_i\beta/\sigma_u)}{[1 - \hat{F}(-X_i\beta/\sigma_u)]} \quad (2.7)$$

$$\lambda_{wi} = \frac{[-\hat{f}(-X_i\beta/\sigma_u)]}{\hat{F}(-X_i\beta/\sigma_u)} \quad (2.8)$$

where  $\hat{f}(-X_i\beta/\sigma_u)$  and  $\hat{F}(-X_i\beta/\sigma_u)$  are respectively standard normal density function and standard normal cumulative density function of evaluated at  $(-X_i\beta/\sigma_u)$ . The sample selection terms enable consistent estimation of the earnings equations.

The estimation of these equations bases mainly on the normality assumption of error term, while as mentioned in Heckman (1979), Maddala (1986), Lee (1982) and Bernhardt(1994) the earnings equations estimated by OLS are not log normal. The errors terms in two equations are not normally distributed. However, Lee(1982) proved that

the two stage method will yield consistent parameter estimates unless the assumption of normality of the error term in sector choice equation is correct and thus the estimates of sample selection term is consistent. That earnings equation errors are not normal does not imply that selection equation error is not normal. The holding of the normality assumption in the selection equation is depends mainly on fit. The problem is that the standard choice model: logit, probit, arctan give similar fits, sometime it is difficult to choose among them. Furthermore, in 1985 and 1990, Heckman and Sedlacek, used a more general function form for the potential earnings than log normal in a maximum likelihood function of a model that similar to the model we used here and they found that if the potential earnings distributions are not too far from normal we might take the errors in the choice equation as being normally distributed and earnings estimations by OLS are still consistent.

## 4.2 Statistical procedure

Our estimation takes place in three stages. Firstly, the reduced form probit equation, equation (2.4), is estimated. The results of this estimation show the influences of individual's characteristics on the selection into self-employment and are used to calculated the selection terms  $\lambda_{ji}$ . In the second stage, earnings equations of two employment statuses are estimated, equation (2.5) and (2.6), in which selection terms are introduced to yield unbiased expected earnings of two employment sectors. Finally, we estimate the structural probit equation, equation (2.1), in which the expected earnings differential is introduced as an explicative variable. Thus, an individual will choose the self-employment sector if:

$$U_{si} - U_{wi} > 0 \Leftrightarrow \alpha(\ln\hat{Y}_{si} - \ln\hat{Y}_{wi}) + \beta X_i + \epsilon_i > 0 \quad (2.9)$$

or in term of structural probit function form:

$$Prob(U_{si} - U_{wi} > 0) = Prob[\alpha(\ln\hat{Y}_{si} - \ln\hat{Y}_{wi}) + \beta X_i + \epsilon_i > 0] \quad (2.10)$$



where  $\ln\hat{Y}_{si}$  and  $\ln\hat{Y}_{wi}$  are respectively the earnings predicted by Heckman or Maddala methods of individual  $i$  in the two employment statuses.

## 5 Data and variables

### 5.1 Data

In this study we use data from the Vietnam household living standards survey of 2004 conducted by the General Statistics Office (GSO) of Vietnam.

In comparison with the 2002 round, the sample in 2004 is rather smaller with 9200 households, but the 2004 survey contains more details on histories of business activities within the household. The questionnaire is made up of 3 categories of worker: salaried worker, farmer and self-employed. The definition of self-employed includes all persons who work for a business enterprise or profession organized and managed by their household at the time of the interview.

We consider in this analysis the behaviour of the full time worker in an urban area so that we exclude from the sample part time workers (less than 40 hours per week), those in agriculture - by the nature of the questionnaire, and those in rural areas. The self-employed workers who have no fixed work location are also excluded from our sample to build a sample of self-employment as homogeneous as possible. Important attention must be paid here, in that, the practice of multi-job holder is rather popular in Vietnam; we also exclude from our sample, workers who have jobs in the two different categories cited above (self-employed / salaried worker). Unlike many articles<sup>7</sup>, we do not restrict our sample to the head of the household due to the tradition of Vietnamese families, more than two generally of working age and/or "basic- families" living in a household.

Our final sample consists of 2527 people, between 16 and 70 years old, both male and female workers, of which 1622 are salaried and 905, are self-employed workers in urban areas of the 64 provinces of the country. The sample of self-employment in our studies is

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7. See: Bernhardt (1994) ; Destré and Henrard (2004).

larger than those in studies of Rees and Shah (1986), Bernhardt (1994), Kolev (2000), Gill (1988), Le (1999b), whose proportions of self-employment are around 10% of the sample. However, if we deal with a male only sample, this proportion drops to 28% in comparison to 36% in the full sample.

## 5.2 Variables

The explanatory variables used in the study consist of explainers of earnings as in the Mincer model and of choice decision. Among these variables, some may affect both potential earnings and the occupational choice of workers.

Academic educational attainment is captured by a set of dummy variables indicating the number of years spent at school, education levels ( *1-5* ; *6-9* ; *10-12 years*). The undergraduate level is a dummy for people who have an undergraduate and postgraduate degree equivalent to at least 15 years of education. A dummy variable is included for workers who have professional training (*Vocation*).

We use (*AGE*) as proxy of potential experiences in the labor market. Following the human capital theory, we assume the usual concave shape of earnings over cycle life. This consideration implies that quadratic term of age (*AGE2*) should be included in the earnings function and accounts for the decreasing return to labor market experience.

Vietnam is decomposed into 8 economic regions, from the North to the South; regional dummy variables are used therefore to capture these eight economic regions. A big city dummy variable (*CITIES*) is included for those who live in the five big cities classified by economic weight in GDP of Vietnam. Economic branches are captured by a series of industrial dummies. Marital status variable (*Married*) is quoted one if the individual is married, zero otherwise.

Included in the selection equation are variables which affect choice decision. In line with the studies of Bernhardt (1994), Evans and Jovanovic (1989) and Blanchflower and Oswald (1998), we assume that the setting up of a business activity is subject to the constraint of financial sources, we thus introduce a variable reflecting financial endowment

in the selection equation: a dummy variable for whether or not they own their home (*HOME*). We consider also the role of the reservation wage on the propensity to becoming self-employed; a log of other household earnings (*OTHERincome*) is then included in our models. Other earnings than wage or income from business activities may be familial aid from within the country or from overseas, incomes from capitals, real state renting and even pension for retired persons. We also adopt the assumption that the existence of children affects the employment of parents. We therefore use three variables classified by the age groups of children: number of children aged 5 years of less (*CHILD0-5*); number of children from 6 to 10 years (*CHILD6-10*); number of children from 11 to 15 years (*CHILD11-15*).

As we presented above, self-employed females remain less studied in the literature of self-employment. We therefore, distinguish estimations for male from female employment in our chapter. Our aim is to give separate information on the determinants of the self-employment sector for men and women. We can make some interesting comparisons from the result of male and female estimation.

## 6 Empirical results and discussion

### 6.1 Characteristics of workers in the sample

Descriptive statistics of our sample are presented in (table 2.4). At first glance, we can see that the average earnings of the self-employed are higher than those of the salaried worker for men only. The differentials, even though they are rather small, are statistically different from zero. Whilst for women, the average earnings of self-employment are a little less than those of employees. The standard deviations of income of the self-employed are also higher than those of employees, as much as twice those of employees. The finding in male statistics support the argument that the self-employed are those who are willing to take more risks in order to gain more out of their job, therefore their incomes are higher and more disperse than those of salaried workers. With respect to the female workforce,

it suggests *a priori* that that higher gains in term of earnings may not be women's self-employment targets. Nevertheless, other incomes (earnings from activities other than business activities for the self-employed, earnings other than wage/salary from paid work for employees) of the self-employed are less than those of employees.

The statistics show that on average; those in the self-employment sector are older and less well educated than those in the wage earning sector. Some interesting divergences in the distribution of workers by age are also worth noticing. As we can see in the figure (2.1), the same patterns are found for both sexes in the two employment groups. Both of the sexes have experienced lower shares of young workers and a higher share of workers over the age of 35 years old in the self-employment sector rather than in the wage/salary sector. It must be noted that the conventional retirement age of the salaried workforce is 60 years old for men and 55 years old for women, in Vietnam. The percentage of workers over the age of 50 declines quickly. In summary, younger workers have a tendency to choose the wage sector, while mature workers have a tendency to choose self-employment.

In regard to marital status, the majority of self-employed are married, while the share of married people in employees sector is lower. The number of children under 5 years old of the self-employed is lower than those of the employees, whereas the number of children from 6 to 16 years old is higher. These results are in line with the statistics of workers age. Young workers have a tendency to work in the salary sector and young people usually have younger children. The number of young children of employees is therefore higher than those of the self-employed.

Concerning educational level; the percentage of the self-employed at under-graduate level is particularly lower than those of the salaried worker. Only 6.39 % compared with 28.92% of men and 3.49% compared with 26.16% of women have an under-graduated or graduated degree in the self-employment sector. Workers with 10-12 years of educations (12 years for baccalaureate level) take the first rank in the salaried sector and the second in self-employment sector. Around 65% of the workers in the salaried sector have 10 years or more of education, compared with only 44% of men and 33% of women in self-

employment. We also note that in the self-employment sector the educational level of men is higher than that of women. The educational level of employees is similar for both men and women. The proportion of male workers who participated in a vocational training course is similar (27.31/22.78). With regard to women, the proportion in the self-employment sector is twice as that of the salaried sector (28.32/12.48).

The distribution of the workforce across industrial branches differs a lot according to sector and sex. Trade (wholesale and retail trade) is the branch which draws the most workers in the self-employment sector, especially for women. The second and third ranks consist of two fields of the service sector (restaurant and hotel; transport and other services). The quantity of business activities in the industrial sector in general, is the lowest, especially for women. These results in the self-employment sector of Vietnam are similar to those of many other developing countries

As for the wage sector, around 45% of employees work in transport and other services branches. Unlike the self-employment sector, the rate of workers in the restaurant and hotel service is particularly low for men. Industrial branches which are different from food processing and confection, leather and shoes take the second rank in drawing in workers. The rate of male workers in these branches is twice as high as that of the females. Industrial branches, such as confection, leather and shoes draw more female than male workers (about 4 times higher).

The last group of variables consists of a set of regional dummy variables. The distribution of workers according to sector and sex is similar for the 8 regions.

The discussion of the earnings functions estimation result proceeds in three steps. In the first step, the reduced form probit equation for the male and female choice equation is displayed. In the second step, the results of OLS estimation of the earnings functions corrected to selection bias are presented. The last step consists of structural probit of choice decision.

## 6.2 Reduced-form probit choice equation

The reduced form selection equation is shown in table (2.5). Although the role of this regression is to obtain estimation of the selectivity terms, it yields some preliminary results worth looking through.

The first interesting result is that the sign of the variable measuring the financial resources is significant at 5 per cent level in male choice equation. Home owners have a higher propensity to become self-employed than those who are not. Reservation wages (OTHER income) however, exercise a negative influence on the status of employment. The higher the secondary source of income is, the lower the possibility becomes to enter into self-employment. These results seem different from existing literature. It should be noted that reservation wages mainly consist of remittances from Vietnamese overseas, and it has been found that this capital flow has been channelled into the setting up of registered companies as well as investment into real state and capital market. We can deduce that reservation wages are used to create formal enterprises rather than informal ones while our sample is made up of a great number of informal ones. It is therefore, suggested that the influence of reservation wages in the setting-up of businesses should have been scaled down in our equation.

For female employment, the signs of these two variables are similar to those in the male equation, but neither of these variables is significant. A similar outcome concerning the role of homeownership in male employment is found in Constant and Zimmermann (2006) with a sample of male German workers.

As for educational attainment, the coefficient of education is negatively significant at 10 percent at the most for male with 10 to 12 years of education or an undergraduate degree, compared with people who have 5 years of education or less. The influence of educational level on the female status experiences a similar trend with the level of significant of 5 per cent at the most. Thus, the results suggest that persons who have less years of education have higher propensity to choose self-employment sector. This result is consistent with the empirical statistics of our sample. Highly educated people

tend to work in salaried employment sector. Vocational training courses (Vocation) have significant and negative impacts on the decision of becoming self-employed. Individuals who follow these courses have less probability to work as self-employed as individuals who do not.

The impact of the numbers of dependant children differs across children's age group. The coefficient is positively significant for male who have children aged from 6 to 10 years old and women who have children aged from 11 to 15 years old. Marital status has no significant influence on the decision of male worker while it is significant at 5 percent for female worker.

All dummy variables for economic branches are significant at 5 percent for both men and women (dichotomous variable for other industries is omitted). In other word, persons who work in these sectors have more propensities for being self-employed.

### 6.3 Earnings equations

The earnings equations are shown in table (2.6). The dependent variable in the earnings equations is the log of annual earnings. As we presented in section 3, the earnings model is based on the theory of earnings developed by Mincer (1974), in which the earnings of an individual depended on educational attainment and work experience. Mincer acknowledged that other factors, beside these two variables, also influence earnings and consequently an extended version of the Mincer model that includes a range of personal characteristics and structural factors, is widely used.

Look first at the influence of unmeasured variables on the earnings ( $\lambda$ ) for male employment. The coefficients of selection correction  $[-f(-X_i\beta/\sigma_u)/F(-X_i\beta/\sigma_u)]$  is negative in earnings equations of employees, the coefficient  $f(-X_i\beta/\sigma_u)/[1 - F(-X_i\beta/\sigma_u)]$  is positive in earnings equation of self-employed. The signs of these coefficients are in line with our expectation but they are however not significant at conventional level. It means, in our sample, any selection bias is found for male in other word, those who work in one sector have not comparative advantages in that sector than persons working in

other sectors. It is noted that our results in male self-employment sector are different from those of Bernhardt (1994) and Le (1999b) who found a negative selection into self-employment in their sample.

In regard of female employment, the selection coefficients are both negative but significant at only 1 per cent for persons working in the salaried sector. The fact that selection terms are not significant in the self-employed equation indicates that self-employed workers are a random sample of all workers. Nevertheless, the significantly negative sign of the selection coefficient of female employees implies the positive selection into this employment status. This result suggests that compared to other workers, people who work in the salaried sector have more comparative advantages in this sector. Therefore, the predicted earnings of these salaried people are higher than those of a person with the same observable characteristics who is randomly chosen from the sample of all workers. Our result is in line with those of Bernhardt (1994), De Wit (1993); Le (1999b) who found positive significant selection bias in the salaried employment of male workforce.

We now consider the influence of measured variables on worker's earnings. In general, the results are particularly strong (in term of significance) for male workers except for regional and industrial dummy variables. Regarding the potential work experience, the results found in this study are consistent with Mincer's model, in which the relationship between experience in workforce and earnings is non linear. The sign of square age is significantly negative for both sexes at the level of 10 per cent at the most. The same signs are found in the earnings equations of Moock & al. (1998) ; Liu (2006) and Pham & Reilly (2006), who use the VLSS 1992-1993, 1997-1998 and 2002 in their studies. For self-employed men, an extra year of age increases the earnings to 9 per cent for the self-employed and to 6 per cent for employees. Our results are partial in contrast with those of Rees and Shah (1986), Le (1999b) to the extent that in their studies, experience in the labour market has a bigger influence over the earnings of employees than the self-employed.

As for educational level; the empirical evidences show that it plays an important role



in the determination of earnings. The returns to education have increased with years of education. For self-employed men, who have 10 to 12 years of education; earn 40.7 per cent higher than those having equal or less than 5 years of education, and 83 per cent for under-graduate level in the self-employment sector. A similar trend is found in the wage sector but the extent to which educational levels influence the earnings is lower. In both equations, empirical evidence shows that the influence of educational attainment on people with 6 to 9 years of education is not significantly different than those having less than 5 years of schooling. In comparison with the results regarding the return to education on earnings in Moock (1998) and Liu (2006), we find an increasing return to education in term of earnings throughout the transition in the labour market of Vietnam.

In addition to academic education, the reward to vocational training course on earnings is strongly significant for employees at the level of 1 per cent. Individuals who take vocational training course earn 17.2 per cent more than an individual who does not. However, it does not have any significant role in the self-employed sector or amongst women workers either. The empirical results show that married people earn significantly more than non-married ones, an extra of 39.2 per cent in the self-employment sector and 18.9 percent in the salaried sector. These results are in line with the ideas that married men, who have family responsibilities, may be put under greater pressure to succeed. Hence, it is assumed that a married man may be more productive than an unmarried man. This rule seems not to be applied for female workers. Marital status does not play any significant impact on female earnings.

A part from human capital characteristics, many researchers added geographic location dummy variables into the earnings equation (e.g. Borjas and Bronas (1989); Kidd (1993); Le (1999b)). The influences of these variables on earnings differs across equation specifications<sup>8</sup>. In our model, we introduce a dummy variable for 5 big cities, and a set of 8 regional dummies. The variable *Cities* is positively significant at 5 per cent in maximum in earnings equations for both of sexes. The earnings of the self-employed living

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8. See : Le 1999b for more details

in these cities are 20.1 per cent higher than those who do not. A similar percentage of 30 per cent was found for employees. Respectively the rate for women are 44.5 and 30 per cent. Among regional dummy variables, at least one of these dummies is statistically significant in each equation. It means that the income of people living in the South East region of Vietnam are higher than those of people living in the Red river Delta region ,at the significant level of 10 per cent at most.

We include also in our earnings model, dummies for economic branches. Empirical results show that economic branches play a significant influence on earnings except for self-employed women. No dummy is significant in earnings equation for self-employed women.

## 6.4 Earnings differentials

As in Bernhardt (1994) , we compute the absolute earnings differentials in the two sectors by estimating the expected earnings of self-employed workers in salaried employment and self-employment sector, and the expected earnings of employees in these two sectors as well. These values are shown in table (2.7). We can see that for male workers, employees have higher potential earnings in both sectors compared with those of the self-employed. The statistical tests show that the differentials between predicted earnings of two worker groups in each situation are significantly different from zero. These results imply the comparative advantages of worker in each section in term of pecuniary gains. However, these advantages, represented by selection term are not significant in earnings equations.

With regard to female workers, the potential earnings of employees in the self-employment sector are higher than the potential earnings of the self-employed in their sector. This gap is also different from zero. However, no significant differential in the expected wage between the self-employed and the employees is found in the salaried sector. These results suggest that wage earners have more comparative advantages in the self-employment sector than do self-employed workers. It is argued by Bernhardt (1994) that there is an

entry barrier to self-employment which protects less productive workers. Therefore, in the case of Vietnam, although female salaried workers have more comparative advantages in self-employment, they are constrained to stay in salaried sector.

The analysis of earnings differential based on the methodology developed by Blinder (1973) and Oaxaca (1973) provide some more details on the determinants of this differential among worker groups. The average absolute earnings differential between two groups is decomposed into an endowment and a residual component. From equation ( 2.5 ) and ( 2.6 ), with weight equal zero ( $W=0$ ) the earnings differential can be decomposed as:

$$\bar{Y}_s - \bar{Y}_w = (\bar{Z}_s - \bar{Z}_w)\hat{\gamma}_w + \bar{Z}_s(\hat{\gamma}_s - \hat{\gamma}_w) \quad (2.11)$$

or for ( $W= 1$ ) as:

$$\bar{Y}_s - \bar{Y}_w = (\bar{Z}_s - \bar{Z}_w)\hat{\gamma}_s + \bar{Z}_w(\hat{\gamma}_s - \hat{\gamma}_w) \quad (2.12)$$

Where bars on variable indicate means and hats denote estimated coefficients, the exogenous variables are valued at their mean value (or in the case of dummy variables, the respective share in the sample). These values are then weighted with the estimated coefficients of the earnings function to calculate the projected earnings (in logarithmic scale). This allows the overall average differential in wages between two worker categories to be decomposed into a part, attributable to differences in observed characteristics of human capital and other control variables, the explained or endowment effect, and an attributable part to differences in the estimated relationship between the self-employments and employees: the unexplained or residual effect. The endowment effect is decomposed by the first group  $(\bar{Z}_s - \bar{Z}_w)\hat{\gamma}_w$  and residual effect the second group  $\bar{Z}_s(\hat{\gamma}_s - \hat{\gamma}_w)$ .

The results are displayed in table (2.8). The endowment effect of male worker is equal to 0.0013 while the residual effect is 0.186 (for  $W$  equal to 1). The results for females are 0.016 and  $-0.154$  respectively. As we can see a major part of the differentials between two worker-categories in potential earnings for both male and female workers are due to the effect of unobserved determinants.

## 6.5 Structural Probit equation

Using the estimated equation ( 2.5 ) and ( 2.6 ) we can compute expected earnings differentials ( $DIFF = \hat{Y}_{si} - \hat{Y}_{wi}$ ) for each individual  $i$ . By introducing this variable into the reduced probit equation, the structural probit equation can be estimated, and the results are displayed in table (2.9). We drop out of these estimations, workers who have never gone to school. Data analysis show that, in our sample in particular, almost all male workers without education have higher expected earnings in the alternative sector, which they do not belong to in reality. This result leads to the fact that the effect of expected earnings differentials is biased due to this group of workers. With regard to females, the estimation results do not change considerably if this group of worker is left out. We prefer to present the dropped out version to facilitate the comparison between gender<sup>9</sup>.

The Chi2 test rejects the constrained model in which all coefficients except the constants term are set equal zero at the level of 1 per cent. Compared to the reduced form approach, the insertion of the earnings differentials as explicative variable in structural probit equation does not lead to important changes in the coefficients of other control variables in the male equation, while for female employment, the role of academic educational level and marital status become irrelevant determinants of the self-employment choice. Like Johansson (2000), we also perform some regressions in which years of education dummy variables or marital status are alternatively dropped, in the structural equation, to test the robustness of earnings differentials. The checks show that our results are not sensitive to the equation specification as in Johansson's one. The reason consist perhaps in the sampling method of Johansson . He pulled together male and female workers in an equation and captured the gender difference by a dichotomous variable.

Regarding the earnings differentials variable, the sign of  $DIFF$  is positively significant in male equation, the structural choice equation. This result suggests that the difference in expected earnings of two sectors is a major determinant of occupational choice for men

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9. Results of full regression will be communicated by contacting authors

in term of coefficient's absolute value. Our findings are in line with those of Rees and Shah (1986) with a sample of UK man worker, Bernhardt (1994) with a sample of white Canadian man, Destré and Henrard (2004) with a sample of Columbian man; Constant and Zimmermann (2006) with a sample of German man.

As for female employment, it seems not surprising to find that the coefficient of earnings differential is negatively significant at 1 per cent. As we can see in the section above, self-employed women have higher predicted earnings in the alternative sector. These results may imply that pecuniary gain should not be a significant motivation which encourages women to go into self-employment. On the contrary, they accept to work in this sector and receive lower earnings than they would have if working in wage sector. The negative association may be caused by the fact that the earnings of self-employed women have been under reported compared with those of wage earners. This finding suggests also that there should be non pecuniary gain that affects the choice of women. Another reason might consist in the fact that a group of female workers have been forced to go into the self-employment sector they couldn't find work in the salaried sector. Therefore, they have to run a low productivity business to survive. It is then suggested that unemployment risk should be included in our model. Our result is similar to that of Gill (1988) [57] who found a negative and significant coefficient of earnings differentials in a sample of US men aged from 20 to 30 years old. It is argued by Gill (1988) that the predicted earnings differentials do not adequately represent the expected lifetime earnings differentials between the two sectors and that wage growth differs across sector.

Education attainment still has an negative influence on the probability of being self employed in both male and female equations. It probably suggests that formal education does not necessarily supply appropriate qualifications for being self-employed (Lentz and Laband, (1990) ). That the negative signs are more important for those who have high level of education or professional education, confirms that education is more appreciated in the employee sector than in self-employment sector (de Wit, (1993) ). Further more, it is interesting to note that educational attainment plays positive impact on earnings

from self-employment. This may imply that the wage sector would offer some unknown opportunities for highly educated persons that would not be found in the self-employment sector.

As regard the effect of age on the probability of being self-employed, the signs are significantly positive in two equations. The relation between age and propensity to be self-employed is suggested to be linear because age square is not significant while introduced in the structural equation. This result is consistent with the practice in Vietnam that, individuals do not leave the labor market at conventional retirement age, but prefer to enter to the self-employed sector, probably due to low pension.

## 7 Conclusion

In this chapter, we investigate the determinants that might affect the workers' decision to go into the self-employment sector in Vietnam. The results show that our variables are more relevant in the estimations of male workers sample.

Our main findings are summarized as follow. Predicted earnings differentials have a positive effect on the propensity of being self-employed for men only. While for females, it plays a negative role. Educational attainment also has a negative effect on the probability of being self-employed for men only. Age has a significant positive influence on the occupational choice. Marital status and dependant children are not significant determinants for self-employment for male workers at all. Whilst for women, the number of dependant children plays a positive impact on the propensity to go into self-employment sector, but the impact differs across children's age. With regard to financial endowment variables, homeownership has a positive effect on the probability of becoming self-employed. However, reservation wages have a negative effect. There two variables are significant for male workers only.

These results suggest that there exist unknown factors which encourage highly educated people to choose salaried sector despite their higher predicted earnings in the self-employment sector. With respect to female workers, unknown pecuniary gain and

unemployment risk are assumed to be important in determining the choice between self-employment and salaried-employment.

Given the important role of self-employment sector in the labor market of Vietnam and in the creating of powerful and dynamic domestic enterprises, this study provides a basis for understanding the determinants of this employment status. This might be helpful for authorities in making adequate policies in the sector.

Figure 2.1: Age distribution of male worker in Vietnam in 2004

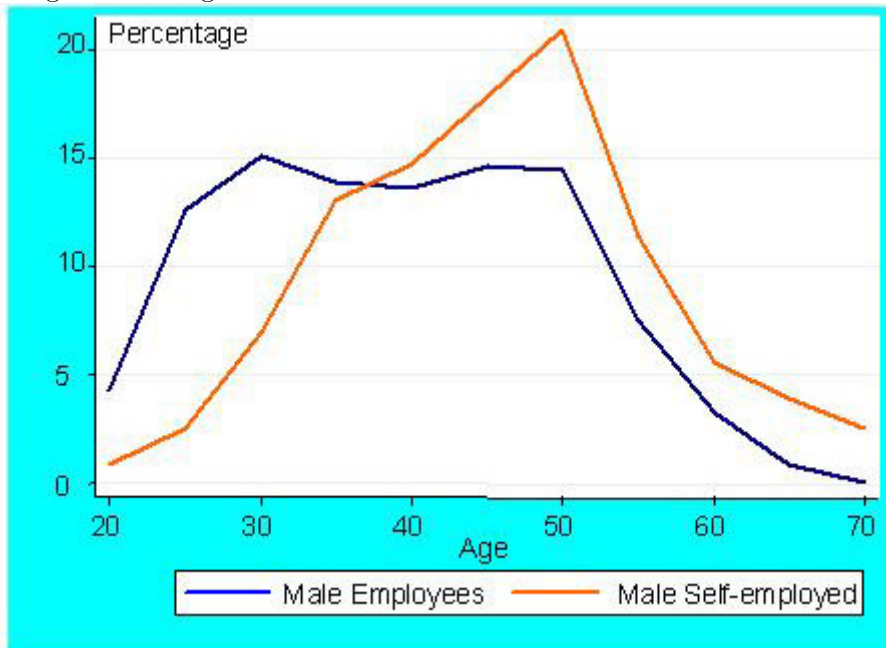


Figure 2.2: Age distribution of female worker in Vietnam in 2004

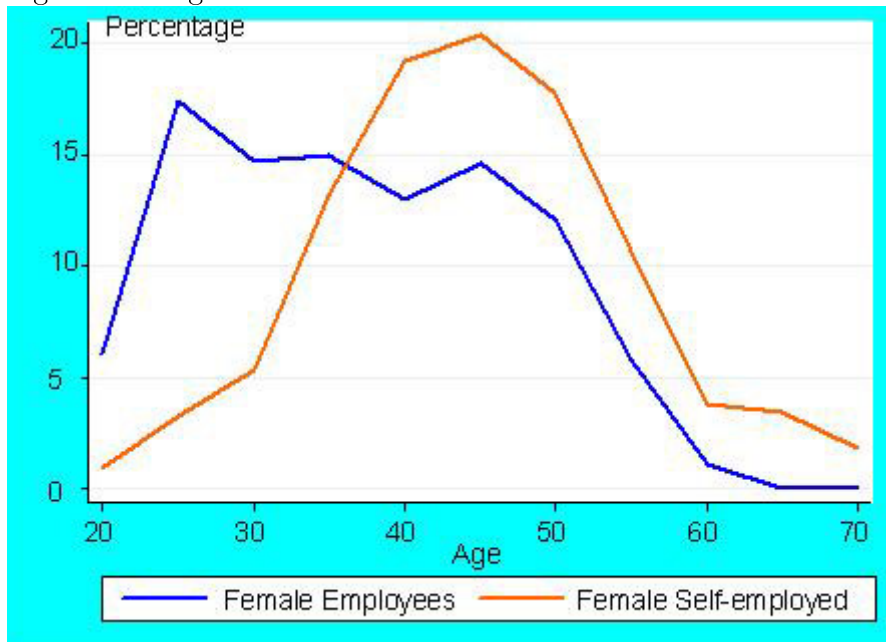




Table 2.4: Descriptive statistics

Variables	Male				Female			
	Self-employed		Employees		Self-employed		Employees	
	Mean	Std	Mean	Std	Mean	Std	Mean	Std
Income	9.83	0.87	9.609	.602	9.39	0.811	9.401	.551
Age	43.60	10.14	37.24	10.82	42.66	9.92	35.02	10.32
Other-income	6.702	2.989	7.328	2.776	7.081	2.687	7.368	2.702
CHILD 0-5	.247		.253		.172		.183	
CHILD 610	.311		.237		.251		.213	
CHILD 1115	.481		.327		.489		.242	
Cities (value in %)	26.38		38.27		29.70		43.60	
Married (value in %)	91.66		72.25		91.3		66.6	
<i>Industry dummies (Value in percent)</i>								
Industries	10.83		37.53		1.83		18.06	
Trade	42.78		10.00		55.96		10.12	
Restaurant & hotel	13.61		1.61		21.65		4.62	
Transport and other services	22.22		43.87		9.17		46.97	
Food processing	5.83		3.12		4.77		5.35	
Confection, leather & shoes	4.72		3.87		6.61		14.88	
<i>Years of education dummies (Value in percent)</i>								
1-5 years	15.56		7.96		22.94		8.38	
6-9 years	39.72		27.2		42.94		22.69	
10-12 years	38.33		35.91		30.64		42.77	
Under-graduate	6.39		28.92		3.49		26.16	
Vocation	22.78		27.31		12.48		28.32	
<i>Regional dummies (Value in percent)</i>								
River Red Delta	18.33		21.83		17.43		24.13	
North Est	9.17		13.33		10.64		11.13	
North West	1.67		1.40		1.28		2.89	
North Central Coast	6.11		7.63		8.26		5.64	
South Central Coast	13.06		12.15		14.31		11.85	
Central High Land	5.00		3.76		8.07		2.17	
South Est	24.44		27.10		23.12		29.77	
Mekong River Delta	22.22		12.80		16.88		12.43	
Observation	360		960		545		692	

Std: standard deviation

Table 2.5: Reduced probit equation

COEFFICIENT	Male (1)	Female (2)
Age	0.001*** (0.0017)	0.0191*** (0.0025)
Years of education dummies (1-5 years: omitted)		
6-9 years	-0.0364 (0.044)	0.0465 (0.062)
10-12 years	-0.0737* (0.044)	-0.152** (0.061)
Under-graduate	-0.258*** (0.027)	-0.375*** (0.044)
Vocation	-0.0847*** (0.028)	-0.186*** (0.046)
Child 0-5	0.0344 (0.030)	0.0743 (0.048)
Child 6-10	0.0459* (0.025)	0.0326 (0.042)
Child 11-15	0.0193 (0.021)	0.105*** (0.035)
Home	0.0929** (0.044)	0.0941 (0.072)
Other	-0.0138*** (0.0045)	-0.00716 (0.0072)
Married	0.0679 (0.046)	0.140** (0.059)
Regional dummies (Red river Delta: omitted)		
North Est	-0.0474 (0.043)	0.0548 (0.074)
North West	0.0136 (0.11)	0.0765 (0.14)
North Central coast	-0.0747 (0.046)	0.140 (0.092)
South Central coast	-0.0203 (0.044)	0.0860 (0.069)
High Central Land	-0.0377	0.372***

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**Table 2.5 – continued from previous page**

COEFFICIENT	Male (1)	Female (2)
	(0.061)	(0.094)
South Est	-0.0495 (0.036)	0.0196 (0.057)
Mekong River Delta	0.0410 (0.047)	0.158** (0.069)
Industry dummies (Other industries: omitted)		
Trade	0.559*** (0.042)	0.762*** (0.038)
Restaurant& hotel	0.657*** (0.052)	0.629*** (0.039)
Transport & other services	0.121*** (0.038)	0.204** (0.082)
Food processing	0.296*** (0.083)	0.414*** (0.079)
Confection, leather & shoes	0.371*** (0.084)	0.429*** (0.071)
Observations	1290	1237

Standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

Marginal effects are reported

Table 2.6: Earnings equations

COEFFICIENT	Male		Female	
	Self-employment (1)	Employees (2)	Self-employment (1)	Employees (2)
Age	0.0920*** (0.033)	0.0642*** (0.012)	0.0513** (0.024)	0.0380*** (0.013)
Age2	-0.114*** (0.042)	-0.0740*** (0.015)	-0.0593** (0.031)	-0.0327* (0.018)
Married	0.392** (0.24)	0.189*** (0.052)	-0.000491 (0.17)	0.0750 (0.051)
<i>Years of education dummies (1-5 years: omitted)</i>				
6-9 years	0.166 (0.16)	0.168** (0.066)	0.130 (0.11)	0.186*** (0.070)
10-12 years	0.407*** (0.18)	0.303*** (0.070)	0.369*** (0.12)	0.313*** (0.069)
Under-graduate	0.830** (0.40)	0.681*** (0.091)	0.872*** (0.28)	0.611*** (0.081)
Vocation	0.172 (0.15)	0.166*** (0.045)	-0.177 (0.14)	0.0764 (0.051)
Cities	0.201* (0.13)	0.301*** (0.041)	0.445*** (0.096)	0.300*** (0.041)
<i>Regional dummies (Red river Delta: omitted)</i>				
North Est	0.148 (0.22)	0.108* (0.062)	0.579*** (0.16)	0.126* (0.069)
North West	-0.207 (0.41)	0.0228 (0.14)	0.0229 (0.35)	0.150 (0.11)
North Central coast	-0.270 (0.25)	0.0228 (0.073)	0.226 (0.17)	-0.0944 (0.085)
South Central Coast	-0.0867 (0.18)	-0.0661 (0.058)	0.394*** (0.14)	-0.0486 (0.062)
Central High Land	0.0336 (0.26)	0.146 (0.093)	0.678*** (0.19)	0.0504 (0.13)
South Est	0.479*** (0.16)	0.322*** (0.048)	0.742*** (0.12)	0.325*** (0.049)
Mekong River Delta	0.0715 (0.17)	0.0604 (0.063)	0.430*** (0.14)	0.0691 (0.066)

Continued on next page

**Table 2.6 – continued from previous page**

COEFFICIENT	Male		Female	
	Self-employment (1)	Employees (2)	Self-employment (1)	Employees (2)
<i>Industry dummies (Other industries: omitted)</i>				
Trade	0.0990 (0.45)	-0.0724 (0.11)	0.208 (0.46)	0.185 (0.11)
Restaurant & hotel	0.108 (0.50)	0.140 (0.18)	0.323 (0.44)	0.0160 (0.12)
Transport & other services	-0.247 (0.22)	-0.0954** (0.041)	0.0797 (0.32)	-0.0552 (0.052)
Food processing	0.301 (0.35)	-0.0930 (0.11)	-0.0732 (0.40)	0.159* (0.092)
Confection, leather & shoes	-0.0976 (0.39)	-0.181* (0.097)	0.0749 (0.37)	-0.0643 (0.068)
Constant	6.913*** (1.31)	7.651*** (0.21)	7.976*** (1.10)	7.955*** (0.23)
lambda	0.0146 (0.37)	-0.0677 (0.15)	0.0771 (0.27)	-0.271*** (0.10)
Observations	1290	1290	1237	1237

Standard errors in parentheses;  
 \*\*\* p < 0.01, \*\* p < 0.05, \* p < 0.1

Table 2.7: Absolute earnings differentials between self-employed and employees

Group	Male		Female	
	Self-employment	Wage sector	Self-employment	Wage sector
Employees	10.15	9.64	9.43	9.5
Self-employed	9.97	9.57	9.36	9.52
Difference	0.174	0.076	-0.074	-0.021
Significant test	(-6.0769)**	(3.7192)***	(-3.0032)***	(-1.2401)

Value in natural logarithms of predicted earnings at group means

\*\*\*: Earnings differentials is significant as 0.01 percent

Table 2.8: Decomposition earnings differentials between self-employed and employees

	Male		Female	
	W = 1	W = 0	W = 1	W = 0
Explained	0.0013	-0.090	0.016	-0.068
Unexplained	0.186	0.277	-0.1542	-0.0703
$\hat{Y}_s$	9.818		9.356	
$\hat{Y}_w$	9.630		9.494	
Difference	0.188		-0.139	
z	0.76		1.24	
P > z	0.447		0.217	

$\hat{Y}_s$ : Expected earnings of self-employed in self-employment sector

$\hat{Y}_w$ : Expected earnings of employees in Wage/salary sector

Value in natural logarithms of predicted earnings at group means

$$W = 0: \bar{Y}_s - \bar{Y}_w = (\bar{Z}_s - \bar{Z}_w)\hat{\gamma}_s + \bar{Z}_w(\hat{\gamma}_s - \hat{\gamma}_w)$$

$$W = 1: \bar{Y}_s - \bar{Y}_w = (\bar{Z}_s - \bar{Z}_w)\hat{\gamma}_w + \bar{Z}_s(\hat{\gamma}_s - \hat{\gamma}_w)$$

Table 2.9: Structural probit equation

COEFFICIENT	Male (1)	Female (2)
DIFF	0.739*** (0.25)	-1.076*** (0.32)
Age	0.0168*** (0.0030)	0.0111*** (0.0034)
Years of education dummies (1-5 years: omitted)		
6-9 years	-0.0843* (0.043)	-0.00270 (0.064)
10- 12 years	-0.203*** (0.051)	-0.0798 (0.067)
Under-graduate	-0.376*** (0.037)	-0.159 (0.11)
Vocation	-0.122*** (0.029)	-0.384*** (0.060)
Child 0-5	0.0329 (0.030)	0.0817* (0.049)
Child 6-10	0.0362 (0.026)	0.0457 (0.042)
Child 11-15	0.00248 (0.022)	0.112*** (0.036)
Home	0.0875* (0.046)	0.0750 (0.074)
OtherINCOME	-0.0122*** (0.0046)	-0.00540 (0.0073)
Married	-0.0728 (0.078)	0.0716 (0.066)
Regional dummies (Red river Delta: omitted)		
North Est	-0.0998** (0.040)	0.431*** (0.11)
North West	0.121 (0.15)	-0.143 (0.13)
North Central coast	0.0813 (0.094)	0.381*** (0.10)
South Central coast	-0.0187	0.500***

Continued on next page

**Table 2.9 – continued from previous page**

COEFFICIENT	Male (1)	Female (2)
	(0.044)	(0.11)
Central High Land	0.0206 (0.072)	0.634*** (0.034)
Southeast	-0.163*** (0.046)	0.452*** (0.12)
Mekong River Delta	-0.000995 (0.046)	0.457*** (0.090)
Industry dummies (Other industries: omitted)		
Trade	0.620*** (0.044)	0.773*** (0.037)
Restaurant	0.788*** (0.035)	0.716*** (0.028)
Transport	0.294*** (0.071)	0.347*** (0.088)
Food processing	0.0770 (0.10)	0.168 (0.13)
Confection, leather & shoes	0.460*** (0.086)	0.527*** (0.063)
Observations	1275	1222

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
Marginal effects are reported





# Chapitre 3

## Determinants of MSEs growth

### 1 Introduction

Research on firm performance has been widely explored in economic literature. Whilst, a large number of economists have concentrated on the firm efficiency aspect, which are often production and cost efficiency, we use another concept of firm performance, which will be discuss further in this chapter, and provide empirical analysis of determinants of firm performance for a sample of micro and small enterprises in Vietnam.

To our knowledge, empirical analysis has often emphasized more on medium and large firms and neglected micro and to some extent small firms. In the same way, the manufacturing industry is the one which has attracted the most attention in the field. In recent years, micro and small firms have renewed attention in the research area. The role of micro and small businesses in economic growth has been valorised among economists and policy makers. Heshmati(2001), in his research on micro and small firms of Sweden, regards small businesses as key role players in the generation of job, new ideas, and encouragement of entrepreneurial activity; they are a major contributor to the well being of nations. In fact, in “the Economics of Self-employment and Entrepreneurship”, Parker(2003), states that owner-managers of small enterprises run the majority of business in most countries. These enterprises provide goods and services that are ignored by large enterprises. They also step up competition, thereby increasing economic efficiency. In a few cases, some of these micro and small enterprises may grow to become giant corporations in the future.

In the case of Vietnam, the development of the private sector and the micro-small enterprise sector, in particular, is regarded as one of the forces behind its rapid growth, after the economic reform in 1986. At the beginning of the reform, the agricultural sector is the first to have benefited from this economic restructuring and has seen a spectacular growth in term of productivity. Time goes by; in the recent years the growth of the non farm private sector has become a centre of interest. By creating jobs and welfare, business activities in non farm sector, they are considered as an effective tool in the battle against the poverty in Vietnam and in the creation of the dynamic of economic structure.

In early 1990s, private enterprises in Vietnam did not receive the worthy attention of policy makers. State owner enterprises have played major roles in the economy. Whereas, according to a survey carried out by the World Bank in Vietnam (World-Bank, 2005), the Vietnamese enterprises' community has grown rapidly since early 1990's and the process of formalized and expanding sped up, particularly from 2000 onwards. They account for 33 per cent value of manufacturing production. However, there is a "gap" between the group of large enterprises, which are often SOEs, or joint-venture enterprises, and the group of micro or small enterprises. Gradually the "missing" group is filled in. Nevertheless, it reveals the question of how economic policies promote the development of medium enterprises. Which constraints do enterprises face while expanding their businesses from small to medium scale? This chapter does not aim to answer directly this kind of question but contributes to clarify the determinants of micro and small enterprise development.

On the one hand, this chapter reports the results of empirical study, investigating the impacts of firms characteristics, particularly size and age, two principal factors affecting growth in the literature, and entrepreneur characteristics, especially education level on the performance of firm. In addition, the chapter provides empirical evaluations of the role of the legal status, the formalization of enterprises in particular, and financial access on firm performance. Furthermore, in the present study, we contribute to the understanding of determinants of micro and small firm performance in a particular context, the case of Vietnam. We do not restrict our analysis to manufacturing firms but include all non-

farm businesses in the country. There have been several research<sup>1</sup> on Vietnamese micro and small firms; however, we have not found any studies which examine the question on determinants of firm performance.

Our main results show that firm size in term of income is positively and significantly related to firm performance. However, in term of regular labor number, controlled for *Income*, this is negatively related to firm performance. Young firms are more successful than older firms but not the very young. Being in rural area plays a positive role on firm performance. The effect of credit access and legal status are rather irrelevant. With regard to owner characteristics, gender seems not to be a determinant of sales increase but decrease. A positive effect of owner educational level is not found. In contrast, having a highly educated owner is found to harm the firm performance.

Our chapter is presented as follow. In section 2, we briefly discuss the theoretical and empirical concept of our analysis. Section 3 introduces the econometric model used in the chapter. Detail information on data and statistical description of variables are presented in the section 4. A presentation and discussion of the results follow in section 5. We conclude in final section.

## 2 Theoretical and empirical framework

The relationship between the firm's performance and its characteristics has generated a large number of theories, as well as, empirical researches in the economic and management disciplines. In one of the first studies on firm dynamic, Gibrat(1931) has claimed that firm's growth is a random process or in other word, it's independent of size . This assertion became the very famous Gibrat'law. Since then on, many theoretic and empirical studies, aimed at examining this law, have been carried out and the results are pretty much equivocal<sup>2</sup>.

In the first model proposed by Gibrat, firm growth or performance is defined as em-

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1. For more detail see: Hemlin and *al.*(1998), Vijverberg and Haughton (2002), Rand(2005), Hansen(2004), Sakai and Takada(2000); Citation would not be exhaustive.

2. For more detail see the excellent survey of Sutton (1997), or that of Coad (2007)

ployment growth rate. Some other measurements of firm performance have been used in its derivative models, which are sales or assets growth rate, sales or valued added per employee (citation should not be exhausted). To some extents, none of the measurements of firm performance is ideal and has often been subjected to certain criticism. Nevertheless, the variety of performance measure will allow sensitive analysis of the results while different definitions of performance are used. Due to the lack of data, which is a usual phenomenon in empirical study, researchers must satisfy with the measure in their hand rather than have nothing. Furthermore, in the case of micro and small firm performance analysis, that the percentage change in employment is highly negative function of size would be avoided. We begin the theoretic concept with two well mentioned factors in firm dynamic literature: size and age. Further, theoretic and empirical frameworks of other variables in our chapter are presented.

Beside the Gibrat's law, the size of a firm affects performance in other ways. Large firms can diversify their capabilities and abilities to exploit the economy of scale and scope. This allows large firms to generate higher performance relative to small firms. Otherwise, the small firms are more flexible than the large ones, both in terms of geographical localization and their abilities to adapt to a changing economic environment. A number of empirical studies reveal that Gibrat's law can not be held, as it is, and it should be used with particular attention regarding firm properties, in term of size, age, industries and so on. Evans(1987a, b), Audretsch(1995) find negative relationship, conditional upon its survival, between growth rate and size of firms in the U.S. for both large and small/medium firms. Das(1995) found similar results for Indian computer firms; Najib (2005),using a sample of SME firms in Morocco, found that size has negative effect on growth. Positive relationship has been found in some studies cited in Hesmati(2001). Studies of Niskanen and Niskanen (2007) on SMEs indicate that the Gibrat law can not be rejected for firms with more than 10 employees. Majumdar(1997), by using two different measurements of firm performance, firm productivity and profitability level; large firms are more profitable but less productive than small firms. In one the few researches

on Vietnamese firm growth, Hansen and *al.*(2004) find that size is negatively related to the growth of Vietnamese firms, but the relationship between firm size and survive is not significant. It should be noted that this study is also carried on a sample of small and medium firms in Vietnam, but only in certain provinces.

With respect to the impact of age, it is well known that due to learning effects, old firms possess more experience in production than young firms and enjoy the benefits of learning and can, therefore, have superior performance. On the other hand, it is suggested that old firms are less flexible to make rapid adjustments to adapt to changes in market environments. As a result, a theoretical prediction for the impact of age on firm performance is impossible *a priori*. Jovanovic (1982), Evans(1987a, b), Ericson and Pakes (1995) find that age has a positive effect on the survival and a negative effect on growth. By contrast, Das(1995) finds that age has a positive effect on firm growth in a study of the Indian computer industry. The effect of age on growth is sensitive to the growth definition in the study of Heshmati(2001) on small firms in Sweden. While using employment growth, the relationship between age and firm growth is negative and becomes positive while assets and sales growth are used in the models. Nichter and Goldmark (2008) claim that this relationship is particularly strong for micro and small firms in the developing countries. By using sample of small firm in some Africa and Latina America, Liedholm(2002) finds that firm age is negatively related to firm growth. However, for the case of Vietnamese firms, it seems that age seems to be relatively irrelevant to firm growth (Hansen and *al.*, 2004).

As claimed in Majumdar (1997), it is feasible that the ambiguity in the literature arises because of institutional issues, which might contain country-specifics, have not been taken on to account. Empirical literature also indicates that firm characteristics, other than size and age, may also play important roles in the performance of a firm. Amongst others things are the legal status of firm, credit access, sector, location and the demographics characteristics of entrepreneur, such as educational level, gender.

The legal status of firm is seen as a potentially important determinant of firm per-

formance. According to Harhoff(1998), the choice of the legal status of a firm reflects its evaluation risk and determines its mode of financing, its type of responsibility and its mode of ownership transfer. Each legal status implies different cost and the choice of legal status can be regarded as a cost minimized problem. By using a sample of 10,000 German firms in four sectors (manufacturing, construction, trade and service), Harhoff(1998) show that limited liability firms have a higher growth rate and a larger insolvency rate than firms with other legal status. Similar results were found in the study of Najib (2005) in a sample of SME firms in Morocco. Whilst, by using a sample of firms in the service related sector, Nguyen(2004) find an insignificant impact of legal status on firm performance. In developing countries, where informal economy is a well known phenomenon, the question on how this informal status affects firm growth should be of interest. In the framework of our studies, informal are firms that are not registered at central or local authorized office. Informality associates with some characteristics that affect the performance of firm. In general, informal firms are subjected to limited production expansion compared with formal firms due to, e.g., constraints in financial access or lack of assistance from law enforcement agencies. Fajnzylber et al. (2006b), in a sample of micro firms in Mexico, estimate the impact of paying taxes as a dummy of being formal on firm performance. They find that firms that pay taxes exhibit significantly higher profits. Similarly, McKenzie and Sakho (2007) find evidence of a positive effect of tax formality on profit in the case of Bolivian small firms. However, they also find that effects of tax formality on firm profit is heterogeneous. Tax registration is found to increase profits for the mid-sized firms in their sample, firms with 2 to 5 workers, but to lower profits for both the smaller and larger firms than this.

Financial access is often regarded as a crucial factor in promoting firm's growth. Otherwise, in the study of Brown and *al.*(2004) the role of financial access in firm performance has been revised for the case of a transition economy, the Romania. They reveal the possibility that some aspects of institutional environment - property rights, contract enforcement, efficient regulation- may be important determinants of small firm growth

and perhaps more important than financial access. In this way, the role of financial access should be empirically examined rather than *a priori* done and the country specific should be taken into account. In line with the suggestion of Brown, the empirical research of Johnson and *al.*(2000) on firms of 5 transition economies show that a lack of external financial does not seem to affect the private firms' growth. Whilst, Pissarides and *al.*(2003) find that constraints on external financing limit, in an important way, the ability to expand production in the case of Russian and Bulgarian small and medium firms. Once again, these results reminds us of the claim of Majumdar(1997) on the role of the institutional effect and country specific in identifying determinants of firms' growth.

Economic literature has not agreed about the definition of entrepreneur in large firms, which are often incorporate firms. As a result, it is found that in empirical studies, the role of entrepreneurs is, to some extent, less mentioned in case of large firms. Nevertheless, the role of entrepreneurs has been emphasized in small scale enterprises. The theories<sup>3</sup> recognize that the attitudes and abilities of the business owner have an important impact on firm growth and will be reflected in strategic choices and the way in which he or she operated the business.

Intuitively, one might expect a higher level of formal education to support firm growth by enhancing firm capabilities. Formal education may provide entrepreneurs with a greater capacity to learn about new production processes and product designs, and may increase owners' flexibility. Burki and Terrel (1998) find that firms with better educated owners and managers are more efficient. On the other hand, the studies of Brown and *al.* (2004) on a sample of Romanian small firms, shows that entrepreneurial skills have a weak effect on growth. A great complexity emerges when the role of educational level on firm performance in developing countries is examined. While, those with a high level of education have greater propensity to be "self-employed" in developed countries, in the developing ones it is often observed that the poor run a micro-small business to survive, due to a lack of opportunities in the alternative employment sector. Nichter and

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3. For more detail about the theories of entrepreneur see Parker(2004)



Goldmark (2008) provide a brief survey of the role of educational level on firm growth in developing countries. They report that firms owned by highly educated entrepreneurs tend to grow more quickly, conditional to the educational threshold of the country.

It has been proposed in the literature, that women may have fewer opportunities to develop relevant experience, may have fewer networks to get assistance and may have greater difficulty in assembling resources. Women may also be more family oriented and have less ambition in pursuing economic goals related to expansion of the firm. These characteristics seem, without doubt, to affect firm growth and performance. In fact, empirical evidences suggest that being female has a negative impact on the growth of small firms but had no impact on firm survival (Cooper and *al.*, 1994).

Other control factors, some of which are firm location, industry sector and province, should be introduced as explicative factors in the empirical model of firm performance. Previous studies of firm performance have revealed substantial differences among industries. In reality, the share of firms in small scale varies clearly by sector. The share of small business in industries characterized by a high degree of economies of scale is relatively low. Further more, firms in this sector are expected to exhibit higher growth rates than firms in industries where scale economies are relatively unimportant (Audretsch, 1995). By contrast, the share of firms in retail and personal service is substantially high due to the possibility of low barrier entry. However, this industry is characterized by an intense competitive pressure. The studies of Liedholm (2002) on small firms shows that the risk of closure is significantly higher in these industries.

The role of firm location is particularly emphasized in the research of Liedholm (2002). He finds that locating in urban areas constitutes a substantial determinant of survive of small firms. Hansen and *al.* (2004) find also that firms in rural areas have higher probability of survive in Vietnam but lower growth rate in term of revenue. Also, differences among provinces in the distribution of firm size or firms' industries may generate the differences in growth performances of micro-small firm across provinces (Papadaki and Chami, 2002)

In the rest of this chapter, we empirically examine the impact of size, age, legal status, credit access and entrepreneur's characteristics on the performance of micro-small firms in the non farm business sector in Vietnam.

### 3 Empirical model and data

#### 3.1 Model

In our study we use the multinomial logit model to investigate the relationship between firm performance and firm characteristics. A time series approach will be ideal to study the dynamic of enterprises. However, as we have only cross section data of enterprises to hand, a static approach is the best thing that can be done. The model is presented as below (see Greene, 2003):

Let  $z_{ij} = 1$  if the  $i^{th}$  enterprise is in the  $j^{th}$  alternative and let  $z_{ij} = 0$  otherwise, where  $j = 1, 2, 3$  equivalence to three outcomes of firm performance which are "up", "unchanged" and "down" respectively.  $Prob(z_{ij} = 1) = \pi_{ij}$  is the probability that  $i^{th}$  enterprise is in  $j^{th}$  alternative and since the probabilities must sum to unity we have:  $\pi_{i1} + \pi_{i2} + \pi_{i3} = 1$ .

The multinomial logit in this case may be expressed (for the simple relationship  $\alpha_j + \beta_j X_j$ ) as:

$$\pi_{ij} = \frac{\exp(a_j + \beta_j X_{ij})}{\exp(a_1 + \beta_1 X_i) + \exp(a_2 + \beta_2 X_i) + \exp(a_3 + \beta_3 X_i)} \quad (3.1)$$

where  $j = 1, 2, 3$ ;  $\alpha$  and  $\beta$  are coefficients to be estimated;  $X$  is a vector of firm characteristics. We assume that the vector of characteristics  $X$  observed in firm  $i$  can influence the probability that firm  $i$  is in the outcome  $j^{th}$ . Imposing the identifying restriction  $\beta_2 = 0$  and then  $\exp(0) = 1$ , we obtain the following expression :

$$\pi_{i1} = \frac{\exp(a_1 + \beta_1 X_i)}{1 + \sum \exp(a_j + \beta_j X_{ij})} \quad (3.2)$$

$$\pi_{i2} = \frac{1}{1 + \sum \exp(a_j + \beta_j X_{ij})} \quad (3.3)$$

$$\pi_{i3} = \frac{\exp(a_3 + \beta_3 X_i)}{1 + \sum \exp(a_j + \beta_j X_{ij})} \quad (3.4)$$

where now  $j=2,3$ . Taking  $\log(\text{odds ratio}) = \ln(\frac{\pi_{i1}}{\pi_{i2}})$  or  $\ln(\frac{\pi_{i3}}{\pi_{i2}})$ , we have:

$$\ln\left(\frac{\pi_{i1}}{\pi_{i2}}\right) = \alpha_1 + \beta_1 X \quad (3.5)$$

$$\ln\left(\frac{\pi_{i3}}{\pi_{i2}}\right) = \alpha_3 + \beta_3 X \quad (3.6)$$

Now equation 3.5 and 3.6 are ready for running statistic procedures. As one can see at these equations, their estimated coefficients can not be used directly to interpret the influence of some characteristics on the probability of belonging to one or other outcomes but only on logarithm of odds ratio. That's why marginal effects are usually reported to investigate the impact of firm characteristics on firm performance. This is written as follow:

$$\delta_{jk} = \frac{\partial \pi_j}{\partial X} = \pi_j(\beta_j - \sum \beta_k \pi_k) \quad (3.7)$$

where  $j = 1, 2, 3$  and  $k = 1; 3$ .

The sign of the marginal effect depends on the expression in the bracket and differ across observations. For simplicity, marginal effect in our study is computed at sample mean. For a dichotomous variable, the difference in the probability for the values 0 to 1 has to be computed.

In the multinomial logit model, outcomes are assumed to be independent among others. It is known as "independence of irrelevant alternatives - IIA" property. This becomes a particular problem when the outcomes are close substitutes for one another. To test the IIA assumption, we refer to the Hausman and McFadden test (Hausman and

McFadden, 1984) and Small-Hsiao test (Small and *al.*, 1985). The intuition for the tests is that, under the IIA assumption, there should be no differences in parameter estimates if we arbitrarily exclude a category.

The Hausman - McFadden test compares the estimators of the same parameters in two slightly different models. One model is restricted, comprising all alternatives of dependent variable, the other model is restricted, one or more alternatives being excluded from the original unrestricted model. If the IIA assumption is held, the exclusion of one or more outcome should not induce a substantial change in the parameter estimates. However, as category is excluded arbitrarily, different exclusion may lead to different test results. It is also possible that the IIA property holds for some groups but not others. Furthermore, the McFadden-Hausman test may yields negative values and it is not clear how to interpret such negative results.

In contrast the Small-Hsiao test is based within the classical testing tradition and always yields a positive test values. The test randomly split sample into sub-sample and the log likelihood test is calculated based on these sub-samples in which outcomes are also excluded arbitrarily.

Quiet often two tests can give different results. Long and Freese (2006) suggest that we can choose a different base category while running the test to verify the IIA assumption as IIA may hold for some groups of outcomes.

## **3.2 Data**

We use data from the Vietnam household living standard survey in 2004. The 2004 version is the only one of the living standard survey series in Vietnam where information on household business history is collected. Information from around 9000 households collected all over the country show that more than 4000 non-farm business activities have been reported. This means one half of Vietnamese households runs a non farm business of one kind or other.

In this chapter, the relation between the firm's characteristics and firm's performance

in the case of small enterprises is considered. We restrict our study to non farm business activities. It should be noted that within the framework of a household survey, business activities in our sample are often in small or very small size. A lot of information that can be collected in the case of large enterprises can not be reported, or are equal to zero in other words; in the case of small enterprises. Hence, to reduce the missing value of the data, we exclude from this analysis all business activities which are not carried out in a fixed location.

It should be noted that, due to the definition of the firm growth in our study, the firms that were created from 2002 up to 2004 (the moment of this survey) are left in our sample.

Our final sample consists of 2802 observations covering 8 regions of the country. We run our analysis on both the urban and rural areas, full time operating as well as non-full time operating firms.

## 4 Variables and descriptive analysis

Definition and some descriptive statistics of the variables used in our estimations are presented hereafter.

### 4.1 Variables

The dependent variable (*Growth*) in this analysis, measures the qualitative variation of firm revenue between 2004 and 2002. It may be not the most suitable measurement of firm performance but it is the only one we have to hand. The state of firm performance is captured by a nominal variable which is equal (1) if firm reported an increase in revenue, (2) if the revenue was unchanged and (3) if the revenue decreased. Consequently, we obtain 3 dummy variables. As mentioned in the study of Nguyen(2004), we are not able to take into account some aspects of subjective valuation of the respondent in the firm (for example : the answer “unchanged” can correspond in fact to a weak increase.)

Included in explicative variables are characteristics of firm itself and of its entrepreneur.

Academic educational attainment of firm's entrepreneur is captured by a set of dummy variables, indicating the number of schooling years in education system (*1-5 ; 6-9; 10-12 years*). *Bachelor* is a dummy for people who have an undergraduate and postgraduate degree equivalent to at least 15 years of education. The gender of entrepreneur is modeled by a dichotomous variable. *Gender* is equal 1 if the entrepreneur is a man and 0 if a women.

The firm age (*Age*) is represented by a set of dummy variables according to year of birth interval (table 3.3). Two important benchmarks according to which firm age interval is chosen should be of interest. First, in 1986, Vietnam has carried out its program of economic reform. From then on, the private sector has been formally recognized in Vietnam. Second, for the last interval of firm age, we choose the 2000 because the law concerning enterprises in Vietnam came into force during this year.

We use variable *Number* to capture the size of firm in term of regular labourers, including firm's owner. One exception should be revealed in particular. That is a firm with 112 regular laborers, which is not a "registered" one, is known as an "outlier", and is not included in our estimation.

The firm size in term of revenues is represented by variable *Income*. As usual, firm revenue is measured in logarithm scale. Consequently, firms which suffer from lost - negative revenue- can not be used in the sample either. It must be noted that this is one of several problems which econometric method has not been able to solve yet in empirical analysis (Parker, 2003).

The survey we use covers registered, not-formally registered and informal firm. The second refers to household firms that are not officially registered by provincial authorities under different establishment and enterprise laws but district authorities. They can but often neither register their company seal with the local department of Police, nor demand for a tax code at the local Department of Taxation. Therefore, they can not produce VAT invoice and consequently their tax payments can not be calculated on the base of their

invoices. The amount of tax payments are negotiated between the “owners” and tax officials (Freeman and *al.*, 2005)

It is interesting to note that statistics in this analysis are drawn from a household survey base. Hence, this sample is not really representative of the micro and small firm population in the country, including household firms which are registered or not, private firms, limited liability firms and shareholding firms. The last form of formally registered firms which are shareholding firms, escaped from this survey. Unfortunately, we do not have any mechanism, such as a weight value, to correct this sample bias. Hence, the (*Private or Lmd. firm*) variable represents either private firms or limited liability firms as defined in the Law of enterprise in Vietnam. The unofficially registered firms (*Not Officially Registered*) variable represents all firms in second category as mentioned above and (*Informal*) variable represents the rest.

The financial access is captured by a dummy variable. (*Credit access*) is equal 1 if a household has borrowed only from a bank and 0 otherwise. For this dummy, we are not able to identify which business activity loans are used in case where there are more than one businesses operated by household’s member, unless they are used for a non farm business activity. We suppose that the households and firms satisfy some conditions imposed by the banking institute in order to get a credit. These conditions might help enterprises run more efficient in term of revenue growth.

Vietnam is decomposed into 8 economic regions from the North to the South. Regional dummy variables are used, therefore, to capture these eight economic regions. Two dummy variables for rural and urban areas (*Urban*) and firms located in 5 big cities (*Cities*) identified according to the administrative classification of Vietnam are also used in our equations.

Both full time and part time operating firms appear in our sample. We consider all firms which have been run for more than 20 days per month and 9 months per year as a full time operating firm. Hence, a dummy for full time operating firm (*Full-time*) is included in our estimations.

Finally, dummies representing economic sectors and provinces are used as controlled variables.

## 4.2 Descriptive analysis

This section shows some characteristics of firms in our sample.

As mentioned above, firms created between 2002 and 2004 are not used in the sample, this section only provides statistics on firms created before 2002 and surviving till the end of 2004. Consequently, the statistics do not represent exactly characteristics of small firm population in Vietnam but firms over the age of two years old in 2004 .

The table (3.1) shows that 50 per cent of firms report an increase of total sales. The share of firms have had a total sales decrease is 14.7 per cent.

The growth rate, in term of the number of firm, sharply increased after the economic reform and particularly in recent years (3.3). Most of firms were created after 1986 and about 50 per cent after 1996. The average year of creation is 1990 and the average age is 13.43 years. If firms created between 2002-2004 are still included in the sample, the share of firm created after 1996 increases to 64 per cent and the average year of birth is 1996. The table (3.4) shows that the share of “down” firm decreases while year of creation increases. Young firms tend to have better growth than old firms. The share of “up” firms created between 1991- 1996 is higher compared with firms created during other years.

It is worth noting that, firms in our sample are almost in a very small scale. The usual size classification in term of employment - 1 – 9 laborers for micro firms, 10 – 49 for small firms -is not suitable in this analysis. To facilitate the descriptive analysis, we gather all firms whose size is greater than 5 in the group of firms with 5 regular laborers. The reason is that the number of firms with more than 5 regular laborers is minor in the sample. Two third of enterprises in our sample are one laborer enterprises. The share of enterprises with more regular laborers drops sharply when the number of firm’s regular laborers increases. In fact, only 2.9 percent of firm have more or equal than 5 regular laborers. In this group of firms, the number ranges from 5 to 30 labors in



general. Regarding firm size in term of employee numbers and growth relationship , we can see in the table (3.1) that the share of “up” firms increases and that of “unchanged” firm decreases with firm size. In comparison with other firms, the share of firm with a decrease in total sales is particularly high for firm with more than 5 regular laborers.

Concerning legal status (table 3.1), in general the share of informal firm is the highest (73.3 per cent). As usual, the share of not officially registered and private and Ltd. firms increases with the employee number.

A little more than 10 per cent of firms have used bank credits during 12 recent months. 27.5 per cent of firms in our sample are seasonal firms. The shares of firms in rural and urban area are 63.7 and 36.2 respectively. 32 per cent of enterprises are run in tertiary and secondary sector. 46.7 per cent are commercial firms in detailed sale or wholesale.

Regarding the entrepreneurs’ level of education (table 3.3), those with 5 years of education or less take a large share (45 per cent). More highly educated entrepreneurs (more than 12 years of education) take only 2.53 per cent and those with 10 to 12 years about 17 per cent. Table (3.2) shows that the threshold of entrepreneurs’ educational level might be 10-12 years of education. The share of “up” firms increases with educational level of entrepreneur, up to this threshold. Beyond 10-12 years of education the share of firms in “up” state decreases.

As found in many empirical researches on micro and small firms in developing countries, the share of firms managed by women is higher than that managed by a man in Vietnam, 56 vs. 40 per cent (table 3.5). However, it seems that man are a little more successful than woman in terms of management ability. The share of “up” firms is higher for man than for woman, 53.24 compared with 48 per cent respectively.

## 5 Results

### 5.1 Specification and IIA tests

Since, we carry our estimations on a large number of variables, multicollinearity could be a problem. However, that the correlation coefficients among the explanatory variables do not exceed 0.45 in absolute values<sup>4</sup>, suggests that multicollinearity is not a major problem. In addition, we carry the principal component analysis, our findings do not support any important relationship among variables.

The growth model has been estimated using the multinomial logit method (Greene, 2003). As we use two variables to measure the firm size, analysis of the results is based on three model specifications: (i) a model with firm size in term of income, (ii) a model with size in term of regular laborers number and finally, (iii) the general model with both variables measuring firm size. Because our data contains both firms in operation part time and full time, two series of estimation have been carried on two kinds of firms and on firms in operation full of time only. The Chi2 test shows that estimated coefficients in our equations are statistically different from 0.

As we have three alternative states of sale growth , we test firstly whether combining the states in two outcomes is possible in our data. To do so, a series of likelihood ratio chi-square tests (Wald test and LR test) to determine whether the coefficient vectors for each possible pair of outcomes are significantly different. The results show that the null hypothesis of no difference in the coefficients for each pair can be rejected at better than 1 percent level, or no categories can be combined in other word. Thus, we ran our MNL model with all three outcomes.

Regarding IIA tests, these sometimes arrive at different conclusions between Hausman test and Small-Hsiao test (table 3.7). We explore also the multinomial probit model, which can be also used for multinomial choice estimation, does not suffer from IIA but it is difficult to calculate and interpret, we find that the results are similar to those obtained

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4. Detail results could be provided by contacting authors

in multinomial logit model. Furthermore, as we do not have unequivocal information that the IIA is violated by our data, we believe that the multinomial logit results are reasonable and we report them here.

## 5.2 Estimated equation

Table (3.8) and (3.10) present the marginal effect of explicative variables on the probability of being in “up” state compared with “unchanged” state and table (3.9) and (3.11) on the probability of being in “decreased” state compared with “unchanged” state. Table (3.10) and (3.11) show the empirical results of full of time operating firms. In general, there are not many differences among results in the tables (3.8), (3.9) and (3.10), (3.11) respectively. Particular comments appearing as large differences are shown.

Overall, logarithm of income has a positive and significant effect on the firm growth. The negative sign in equations (1-6) of table(3.9 and 3.11); mean that the propensity for being in the “down” state is negatively related to the increase of income. In other word, the “unchanged” state is better than the “down” state; the probability of arriving at a worse state decreases with increased income. This effect is consistent with or without variable *Number* and for both full data base and full time firms only. The probability of being in the “up” state increases by about 15 per cent in equation in table (3.8) and (3.10) - “up” state vs. “unchanged” state and the probability of being in the “decreased” state drops by about 5 per cent while income increases by unity. All these coefficients are significant at 1 per cent level. Using similar measurements of firm size, Vijverberg and Haughton (2002) have found that large firms have higher probability of survival than small firms.

Regarding the effect of variable *Number*, a positive effect of *Number* on growth at the significant level of 1 per cent has been found when *Income* is not included in the model (equation 2 , table 3.8). The propensity of being in “down” compared with “unchanged” state decreases but the coefficient is not significant at conventional level. Overall, *Number* is positively related to firm growth.

While both *Income* and *Number* are introduced in the equation, the effect of *Number* on growth has clearly changed. First, the coefficient of *Number* becomes insignificant in table 3.9 in which firm growth switches from the “up” state to the “unchanged” state. Second, the effect of *Number* becomes positive and significant in the “down-to-unchanged” equation at the level of 5 per cent. This means *Number* plays a negative role on firm performance as “down” is worse than “unchanged”. This result suggests that for micro and small firms, number of employees is a sensitive measurement of firm size and firm “income” might be a more suitable measurement. When other information on firm size is controlled, firm size in term of employee number seems to be irrelevant to firm growth in “up -to- unchanged” equation and negatively related to growth in “down-to-unchanged” equation. The effect of *Income* remains consistent across firm specification.

In regard to firm age, young firms tend to have a better performance than old firms. Firms in the medium age group - which were created between 1991-1995- seem to have a slightly higher level of performance compared with younger firms - which were created after 1996. In “up-to unchanged” equation, the coefficient of firms created from 1991 to 1995 is the highest, about 11 percent in average, and significant at the level of 5 per cent. However, in “down to unchanged” equation, coefficients of firms created between 1991 and 1995 are negative but not significant. The coefficient of firms created between 1996 and 2001 are negative and significant. This is to say that the probability of being in “worse” state -”down” state, compared with “better” state - “unchanged” state, decreases for firms created after 1996.

Being in urban area, variable (*Urban*) and big cities , variable (*Cities*) is negatively related to firm performance. With regard to (*Cities*), all coefficients are significant at 1 per cent. In the “up -to- unchanged” equation, the probability of being in the “up” state decreases by around 10 per cent (the number is rounded throughout firm specification) and increases by 8 to 10 per cent in the “down-to-unchanged” equation, compared with the propensity for being in the “unchanged” state. Concerning variable *Urban*, its coefficient is not significant in equation without *Income*. Otherwise, they are significant at the level

of 1 per cent. We can interpret this outcome as follow: controlled for income level, firms in urban area have worse performance than those in rural area. Nevertheless, while only the number of labourers is controlled, it seems that there are no significant differences of performance between firms in urban and rural area. These results support the ideas that firm size in term of employee numbers, including the owner, might not be the most suitable determinant of firm performance in the case of Vietnamese micro and small firms. Our results are, to some extent similar to those of Hansen (2004) who finds that rural firms have a higher probability of survive as competition in rural areas is lower than in urban ones.

Our empirical results suggest that there is no difference of performance between Private or Lmd. firms and unofficially registered firms. Coefficients of Private or Lmd. are positive but not significant at all, throughout equation specification. The effect of unofficially registered and informal status on firm performance is more complex. The probability of being in the “up” state instead of in the “unchanged” state of informal firms decreases by 7.3 per cent compared with unofficially registered firms (table 3.8, equation 2). This means that unofficially registered firms have a higher probability of having an increase in revenue than the informal ones. It should be of interest to note that while both *Income* and *Number* are controlled, variable *Informal* becomes insignificant (table 3.8, equation 3). Whereas, the propensity that firms have a decrease in sales fell by 4.8 per cent for informal firms compared with unofficially registered ones (table 3.9, equation 3). The coefficient is significant as the level of 1 per cent. Similar results are also found for firm in full of time operation (table 3.10 and 3.11). These outcomes suggest that the “legal status” does not induce significant effect of firm growth in our sample. Our results are different from the finding of Hansen (2004). He reveals that household enterprises have a significantly lower revenue growth than cooperatives, private and limited liability companies.

That the coefficients of *Credit access* are not significant in all equations is an interesting point. This result implies that having credit from a bank does not play any role in the

performance of micro and small firms. It also reveals the fact that for micro and small firms, which often invest less in capital, use of external capital is not popular. When we increase access to credit by including different creditors other than banks, the results remain similar.

Regarding the dummy for full of time operating firms, we find that the probability of having an increase in sales rises by 10 per cent for the aforesaid firms. Otherwise, the coefficients are significant only in equation without variable *Income*. In comparison with part time operating firms, the probability of being in the “down” state, in stead of the “unchanged” state, decreases by 4.2 per cent (table 3.9). This outcome implies that full time operating firms are, to some extent, in better state of growth than part time ones.

With regard to the effect of entrepreneur characteristics on firm performance, apparently more formal education does not induce a higher performance level. In the “up to unchanged” equation, empirical result shows that the probability of being in the “up” state decreases for firms owned by people having bachelor degrees but increases by 6.8 per cent for firms owned by people having 10 to 12 years of education. In the estimation of only full time operating firms, only, coefficients of *Bachelor* are negative and significant at 5 per cent. This controversial results might be explained by the fact that an owner with higher education is probably distracted by other activities and puts less effort in monitoring their workforce (Alvarez and Crepsi, 2003). In the “down to unchanged” equations, owner education seems not to affect firm performance.

The results for the relationship between gender and firm growth show that it is negative and significant at 5 percent when *Income* is in control (table 3.9 and 3.11). We can interpret the outcome as, the probability of being in the “worse” state of growth (down state) increases by at least 4 per cent when the owners are men. However, between the “up” state and the “unchanged” state, there is no different between genders, controlled for *Income*.

Concerning sector effect, we find that positive and significant effect on firm growth are found in retail and wholesale sectors. The probability that firms have an increase

in sales rises by 6.5 per cent when controlled for *Income*, whilst firms suffering from a reduction in sales, decreases by about 3 per cent. Being in service sector seems to have no any effect on firm growth.

Finally, we found that the effect of geographic zone is significant. Firm performances are significantly better or worse in some provinces than in others.

## 6 Conclusions

In this chapter, we investigate factors which may affect performance of micro and small firms in Vietnam. We use the most recent survey on living standards of Vietnam, the 2004 version and as it is one of the most recent data base on Vietnamese micro and small firms.

Our analysis is carried out on a sample of 2799 observation, all over the country. No restrictions on economic industries are set. Our measure of firm performance is a nominal change in sales during 2004 with respect of sales of 2002. We use the multinomial logit to study to relationship between firm characteristics and firm performance. The specification tests do not reject this model.

The empirical results, in this chapter show that the size of firm, in term of revenue (*Income*) have a positive and significant effect on the firm performance. However, there is no absolutely positive relationship between size in terms of employee number (*Number*) and firm performance. While *Number* is the unique measurement of firm size, it plays both a positive and significant role in the probability of being in the “up” state. Whereas, when both *Income* and *Number* are controlled in the model, the effect of *Number* becomes negatively insignificant or negatively significant on firm performance. *Number* does not have significant effect on performance while growth state switches from the “down” to “unchanged” state. This result suggests that regular labourer number might not be the most suitable measure of firm size for micro and small businesses. With respect to the firm age, we find that young firms tend to have better performance than old firms. However, most recently created firms (from 2000) are not those with the best state of performance,

but those created in the 1990s. Credit access does not have a significant effect on firm performance. The effect of legal status is rather weak. Informal firms seem to be in a worst state of growth; there is no difference in term of performance between unofficially registered and Private or Lmd. firms. Geographic location plays an important role in firm growth. Controlled for both measures of size and others explicative variables, firms in rural areas are in a better state of growth. Regarding some owner characteristics, the results show that owner's gender is not related to the increase in sales of firms but slightly negative related to its decrease. Higher level of formal education does not induce to better performance. Finally, sectors and provinces are also significant determinants of firm performance.



## 7 Appendix

Table 3.1: Firm distribution by size and legal status and growth

Legal status	Employee number					Total
	1	2	3	4	over 5	
Unofficially registered	335 <i>18.82</i>	215 <i>31.25</i>	41 <i>48.24</i>	62 <i>36.69</i>	42 <i>54.55</i>	695 <i>24.83</i>
Informal	1,420 <i>79.78</i>	463 <i>67.3</i>	103 <i>60.95</i>	41 <i>48.24</i>	24 <i>33.24</i>	2,051 <i>73.28</i>
Private or Ltd.	25 <i>1.4</i>	10 <i>1.45</i>	4 <i>2.37</i>	3 <i>3.53</i>	11 <i>13.75</i>	53 <i>1.89</i>
Growth						Total
Up	834 <i>46.85</i>	372 <i>54.07</i>	95 <i>56.21</i>	56 <i>65.88</i>	53 <i>68.83</i>	1,410 <i>50.38</i>
Unchanged	686 <i>38.54</i>	211 <i>30.67</i>	48 <i>28.4</i>	21 <i>24.71</i>	11 <i>14.29</i>	977 <i>31.91</i>
Down	260 <i>14.61</i>	105 <i>15.26</i>	26 <i>15.38</i>	8 <i>9.41</i>	13 <i>16.88</i>	412 <i>14.7</i>
Total	1,780	688	169	85	77	2,799

Percentage values in italic calculated by column

Panel B: Pearson  $\chi^2(8)^* = 42.9604$  ; Pr = 0.000

\*:  $H_0$  = rows and columns are independent

Table 3.2: Firm distribution by owner educational level and growth

Edu. Level	Growth			Total
	Up	Unchanged	Down	Total
1-5 years of edu.	582 <i>45.97</i>	490 <i>38.77</i>	192 <i>15.17</i>	1,264 <i>100</i>
6-9 years of edu.	522 <i>52.83</i>	330 <i>33.43</i>	135 <i>13.66</i>	987 <i>100</i>
10-12 years of edu.	278 <i>58.16</i>	127 <i>26.57</i>	73 <i>15.27</i>	478 <i>100</i>
Bachelor	28 <i>40</i>	30 <i>42.86</i>	12 <i>17.14</i>	70 <i>100</i>
Total	1,410 <i>50.32</i>	977 <i>34.91</i>	412 <i>14.7</i>	2,799 <i>100</i>

Percentage values in italic calculated by row

Pearson  $\chi^2(6) = 31.2770$ ; Pr = 0.000

\*:  $H_0$  = rows and columns are independent

Table 3.3: Descriptive statistics

<b>Variable</b>		<b>Value</b>
Income *	Mean	13257.52
Firm's regular labor number *	Mean	1.57
Gender	Female	55.88
	Male	44.12
Educational level	< 5 years of edu.	45.15
	6 - 9	35.27
	10 -12	17.05
	Bachelor.	2.53
Full time operating firm	No	27.53
	Yes	72.47
Urban area	Rural	63.73
	Urban	36.27
Cities	No	86.76
	Yes	13.24
Y. of birth	1944 - 1980	5.49
	1981 - 1985	5.21
	1986 - 1990	10.77
	1991-1995	24.57
	1996 -1999	32.28
	2000-2002	21.66
Credit access	No	89.90
	Yes	10.10
Economic sector	Industry	32.35
	Retail and whole sale	46.75
	Service	20.9
Economic region	River Red Delta	24.07
	North Est	12.34
	North West	1.96
	North Central Coast	11.84
	South Central Coast	10.84
	Central High Land	5.24
	South Est	14.98
	Mekong River Delta	18.72

Variables without (\*) are presented in percentage values

Income in VND, Unit: 1000 VND

Table 3.4: Firm distribution by age and growth

Age	Growth			Total
	Up	Unchanged	Down	
1944-1980	60 <i>38.96</i>	63 <i>41.18</i>	30 <i>19.48</i>	153
1981-1985	63 <i>43.15</i>	53 <i>36.3</i>	30 <i>20.55</i>	146
1986-1990	155 <i>51.67</i>	96 <i>32</i>	49 <i>16.33</i>	300
1991-1995	369 <i>53.56</i>	208 <i>30.19</i>	112 <i>16.26</i>	689
1996-1999	468 <i>51.71</i>	324 <i>35.8</i>	113 <i>12.49</i>	905
2000-2003	295 <i>48.6</i>	233 <i>38.45</i>	78 <i>12.85</i>	606
Total	1,410 <i>50.38</i>	977 <i>34.91</i>	412 <i>14.72</i>	2,799

Percentage values in italic calculated by row

Pearson  $\chi^2(10)^* = 28.7167$  ; Pr = 0.001

\*:  $H_0 =$  rows and columns are independent

Table 3.5: Firm distribution by gender and growth

Gender	Growth			Total
	Up	Unchanged	Down	
Women	752 <i>53.33</i>	605 <i>61.8</i>	209 <i>50.73</i>	1,566 <i>55.95</i>
Men	658 <i>46.67</i>	372 <i>38.08</i>	203 <i>49.27</i>	1,233 <i>44.05</i>
Total	1,410	979	412	2,799

Percentage values in italic calculated by column;

Pearson  $\chi^2(2)^* = 22.6239$ ; Pr = 0.000

\*:  $H_0 =$  rows and columns are independent

Table 3.6: Wald test and LR test for combining outcomes

Equation	Outcome	Wald		LR	
		Chi2	P value	Chi2	P value
1	1-3	186.886	0	202.679	0
	1-2	206.402	0	235.359	0
	3-2	65.599	0	67.628	0
2	1-3	101.46	0	105.284	0
	1-2	126.282	0	144.097	0
	3-2	64.39	0	66.001	0
3	1-3	188.937	0	204.767	0
	1-2	204.815	0	235.32	0
	3-2	69.493	0	71.956	0
4	1-3	103.356	0	111.874	0
	1-2	134.433	0	151.679	0
	3-2	54.845	0	57.139	0
5	1-3	52	0.001	53.506	0
	1-2	94.372	0	105.63	0
	3-2	51.907	0.001	53.65	0
6	1-3	106.051	0	114.833	0
	1-2	134.107	0	151.801	0
	3-2	57.38	0	60.425	0

Ho: alternatives can be collapsed

1: Up state ; 2: Unchanged state ; 3: Down state

Table 3.7: IIA test results

Equation	Hausman-McFadden				Small-Hsiao			
	Down-U		Up-U		Down-U		Up-U	
	Chi2	Ho	Chi2	Ho	Chi2	Ho	Chi2	Ho
1	6.248	For	4.811	For	29.982	For	24.881	For
2	-2.655	-	-0.11	-	32.111	For	38.83	For
3	1.693	For	52.573	Agt.	24.441	For	30.349	For
4	1.96	For	-2.939	-	16.513	For	23.019	For
5	-0.628	-	0.623	For	29.25	For	32.311	For
6	1.317	For	-24.73	-	36.909	For	28.312	For

Ho: IIA assumption can not be violated

U.: Unchanged state ; Agt. : against Ho

Table 3.8: “Up” state vs. “Unchanged” state of sales growth

COEFFICIENT	(1)	(2)	(3)
Income	0.147*** [0.013]		0.147*** [0.014]
Number		0.0304*** [0.0081]	0.00198 [0.0075]
Cities	-0.133*** [0.033]	-0.0942*** [0.032]	-0.133*** [0.033]
Y. of birth 1981-1986	0.0151 [0.062]	0.035 [0.061]	0.0146 [0.062]
Y. of birth 1986-1990	0.0770 [0.054]	0.1* [0.052]	0.0762 [0.054]
Y. of birth 1991-1995	0.111** [0.049]	0.126*** [0.047]	0.111** [0.049]
Y. of birth 1996-2000	0.102** [0.048]	0.109** [0.046]	0.102** [0.048]
Y. of birth 2000-2001	0.0883* [0.049]	0.0942** [0.048]	0.0889* [0.049]
Informal firm	-0.0024 [0.026]	-0.0736*** [0.025]	-0.0022 [0.026]
Private or Lmd. Firm	0.0364 [0.078]	0.0011 [0.078]	0.0386 [0.079]
6-9 years of Education	0.00689 [0.024]	0.0350 [0.023]	0.00666 [0.024]
10-12 years of Education	0.0377 [0.031]	0.0686** [0.030]	0.0357 [0.031]
Over 12 years (Bachelor)	-0.1365** [0.069]	-0.0970 [0.067]	-0.136** [0.069]
Credit access	0.0153 [0.034]	0.0403 [0.034]	0.0157 [0.034]
Urban area	-0.0745*** [0.024]	-0.0258 [0.023]	-0.0749*** [0.024]
Full time	0.00611 [0.026]	0.107*** [0.024]	0.00663 [0.026]
Gender	-0.00359 [0.021]	0.0376* [0.020]	-0.00433 [0.021]

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**Table 3.8 – continued from previous page**

COEFFICIENT	(1)	(2)	(3)
Retail and whole sale	0.0654*** [0.024]	0.104*** [0.024]	0.0659*** [0.025]
Service	-0.0148 [0.030]	0.0356 [0.029]	-0.0146 [0.030]
North Est	-0.0539 [0.036]	-0.0561 [0.035]	-0.0527 [0.036]
North West	0.113 [0.077]	0.0664 [0.075]	0.112 [0.077]
North Central Coast	0.0170 [0.036]	0.00442 [0.035]	0.0170 [0.036]
South Central Coast	-0.0691* [0.037]	-0.0459 [0.036]	-0.0694* [0.037]
Central High Land	-0.112** [0.050]	-0.0815* [0.048]	-0.112** [0.050]
South Est	-0.207*** [0.035]	-0.122*** [0.034]	-0.207*** [0.035]
Mekong River Delta	-0.136*** [0.034]	-0.0962*** [0.033]	-0.136*** [0.034]
Constant	-1.157*** [0.12]	-0.0369 [0.062]	-1.156*** [0.12]
Observations	2799	2799	2799
Pseudo $R^2$	0.0643	0.04	0.0649

Standard errors in brackets

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

Table 3.9: “Down” state vs. “Unchanged” state of sales growth

COEFFICIENT	(1)	(2)	(3)
INCOME	-0.0558*** [0.0075]		-0.0601*** [0.0078]
Number		-0.0000893 [0.0045]	0.00789** [0.0039]
CITIES	0.1019*** [0.019]	0.0829*** [0.020]	0.1018*** [0.019]
Y. of birth 1981-1985	0.0213 [0.036]	0.0114 [0.036]	0.0213 [0.036]
Y. of birth 1986-1990	-0.0125 [0.032]	-0.0230 [0.032]	-0.0127 [0.032]
Y. of birth 1991-1995	-0.0134 [0.028]	-0.0211 [0.029]	-0.0139 [0.028]
Y. of birth 1996- 1999	-0.0556** [0.028]	-0.0590** [0.028]	-0.056** [0.028]
Y. of birth 2000-2001	-0.0529* [0.030]	-0.0560** [0.030]	-0.0533** [0.030]
Informal firm	-0.0500*** [0.017]	-0.0116 [0.017]	-0.0477*** [0.017]
Private or Lmd.	-0.0124 [0.051]	-0.0105 [0.053]	-0.026 [0.053]
6-9 years of Education	-0.0024 [0.016]	-0.0136 [0.016]	-0.00230 [0.016]
10-12 years of Education	0.0161 [0.020]	0.0016 [0.020]	0.0174 [0.020]
Over 12 years (Bachelor)	0.0046 [0.042]	-0.0098 [0.042]	0.0008 [0.042]
Credit access	0.00422 [0.023]	-0.0118 [0.024]	-0.00034 [0.023]
Urban area	0.0448*** [0.016]	0.0231 [0.015]	0.046*** [0.016]
Full time operating firm	-0.0450*** [0.016]	-0.0920*** [0.015]	-0.0423** [0.016]
Gender	0.0493*** [0.014]	0.0285** [0.014]	0.04752*** [0.014]

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**Table 3.9 – continued from previous page**

COEFFICIENT	(1)	(2)	(3)
Secondary sector	-0.0252 [0.016]	-0.0365** [0.016]	-0.0201 [0.016]
Tertiary sector	0.00263 [0.019]	-0.0119 [0.019]	0.00776 [0.019]
North Est	-0.00661 [0.024]	0.00153 [0.024]	-0.00417 [0.024]
North West	-0.0922 [0.059]	-0.0711 [0.060]	-0.0909 [0.059]
North Central Coast	-0.0354 [0.026]	-0.0262 [0.026]	-0.0337 [0.026]
South Central Coast	0.00854 [0.025]	0.00204 [0.025]	0.0103 [0.025]
Central High Land	0.0319 [0.032]	0.0251 [0.032]	0.0344 [0.032]
South Est	0.0595*** [0.022]	0.0294 [0.022]	0.0624*** [0.022]
Mekong River Delta	0.0378* [0.022]	0.0249 [0.022]	0.0396* [0.022]
Constant	0.406*** [0.070]	-0.0385 [0.039]	0.424*** [0.070]
Observations	2799	2799	2799
Pseudo $R^2$	0.0643	0.04	0.0649

Standard errors in brackets

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1



Table 3.10: “Up” state vs. “Unchanged” state of sales growth

COEFFICIENT	(4)	(5)	(6)
Income	0.135*** [0.016]		0.1366*** [0.017]
Number		0.0211** [0.0088]	-0.0012 [0.0084]
Cities	-0.142*** [0.036]	-0.10*** [0.035]	-0.1420*** [0.036]
Y. of birth 1981-1985	-0.00956 [0.073]	0.0081 [0.071]	-0.0096 [0.073]
Y. of birth 1986-1990	0.0410 [0.061]	0.0610 [0.060]	0.0410 [0.061]
Y. of birth 1991-1995	0.106* [0.056]	0.116** [0.054]	0.1066* [0.056]
Y. of birth 1996- 1999	0.1093** [0.055]	0.110** [0.054]	0.1099** [0.055]
Y. of birth 2000-2001	0.06034 [0.058]	0.0560 [0.056]	0.0622 [0.058]
Informal firm	-0.0074 [0.029]	-0.0731*** [0.027]	-0.0076 [0.029]
Private or Lmd. firm	0.0458 [0.085]	0.0214 [0.085]	0.0560 [0.087]
6-9 years of Education	-0.0072 [0.028]	0.0246 [0.028]	-0.0080 [0.028]
10 - 12 years of Education	0.0577* [0.035]	0.0860** [0.035]	0.0564 [0.035]
Over 12 years (Bachelor)	-0.193** [0.076]	-0.1359* [0.074]	-0.1903** [0.077]
Credit access	0.0281 [0.040]	0.0498 [0.040]	0.0298 [0.041]
Urban area	-0.0631** [0.026]	-0.0213 [0.025]	-0.0639** [0.026]
Gender	0.010 [0.025]	0.0506** [0.024]	0.0115 [0.025]

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**Table 3.10 – continued from previous page**

COEFFICIENT	(4)	(5)	(6)
Retail and whole sale	0.0737** [0.029]	0.0922*** [0.029]	0.0724** [0.030]
Service	-0.00636 [0.035]	0.0263 [0.034]	-0.00792 [0.035]
North Est	-0.0980** [0.046]	-0.0836* [0.045]	-0.0971** [0.046]
North West	0.165 [0.12]	0.142 [0.11]	0.164 [0.12]
North Central Coast	-0.00874 [0.045]	-0.0131 [0.044]	-0.00985 [0.045]
South Central Coast	-0.0602 [0.043]	-0.0397 [0.042]	-0.0617 [0.043]
Central High Land	-0.145** [0.059]	-0.102* [0.057]	-0.145** [0.059]
South Est	-0.186*** [0.040]	-0.101*** [0.038]	-0.188*** [0.040]
Mekong River Delta	-0.120*** [0.038]	-0.0787** [0.037]	-0.121*** [0.038]
Constant	-1.046*** [0.15]	0.0911 [0.068]	-1.057*** [0.16]
Observations	2029	2029	2029
Pseudo $R^2$	0.0587	0.0385	0.0596

Standard errors in brackets

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

Table 3.11: “Down” state vs. “Unchanged” state of sales growth

COEFFICIENT	(4)	(5)	(6)
Income	-0.0552*** [0.0090]		-0.0603*** [0.0093]
Number		0.00167 [0.0041]	0.0078** [0.0037]
Cities	0.0989*** [0.020]	0.0678*** [0.020]	0.0901*** [0.020]
Y. of birth 1981-1985	0.0355 [0.039]	0.0325 [0.049]	0.0470 [0.039]
Y. of birth 1986-1990	-0.0057 [0.035]	-0.0147 [0.033]	-0.0044 [0.035]
Y. of birth 1991-1995	-0.0025 [0.031]	-0.0071 [0.032]	0.0011 [0.031]
Y. of birth 1996- 1999	-0.0598** [0.032]	-0.0606** [0.032]	-0.0591** [0.032]
Y. of birth 2000-2001	-0.0410 [0.033]	-0.0387 [0.034]	-0.0402 [0.033]
Informal firm	-0.0607*** [0.017]	-0.0239 [0.017]	-0.0591*** [0.017]
Private or Lmd. firm	0.0054 [0.046]	0.0003 [0.049]	-0.0140 [0.049]
6-9 years of Education	0.0073 [0.018]	-0.00742 [0.018]	0.0079 [0.018]
10 - 12 years of Education	0.0033 [0.022]	-0.0106 [0.022]	0.0044 [0.022]
Over 12 years (Bachelor)	0.0412 [0.041]	0.0136 [0.042]	0.0353 [0.042]
Credit access	0.0191 [0.024]	0.0039 [0.025]	0.0140 [0.025]
Urban area	0.0289* [0.016]	0.00987 [0.016]	0.0304* [0.016]
gender	0.0446*** [0.015]	0.0232 [0.015]	0.0420*** [0.015]

Continued on next page

**Table 3.11 – continued from previous page**

COEFFICIENT	(1) semi4	(2) semi4+1	(3) semi5
Retail and whole sale	-0.0320* [0.018]	-0.0341* [0.019]	-0.0262 [0.018]
Service	0.0123 [0.020]	0.00543 [0.021]	0.0173 [0.021]
North Est	0.0250 [0.028]	0.0258 [0.029]	0.0289 [0.028]
North West	-0.0415 [0.080]	-0.0368 [0.083]	-0.0406 [0.080]
North Central Coast	-0.0381 [0.032]	-0.0327 [0.033]	-0.0355 [0.032]
South Central Coast	0.0211 [0.026]	0.0142 [0.027]	0.0233 [0.026]
Central High Land	0.0615* [0.035]	0.0459 [0.036]	0.0640* [0.035]
South Est	0.0586** [0.024]	0.0241 [0.024]	0.0620*** [0.024]
Mekong River Delta	0.0311 [0.024]	0.0136 [0.024]	0.0327 [0.024]
Constant	0.377*** [0.087]	-0.110*** [0.041]	0.403*** [0.087]
Observations	2029	2029	2029
Pseudo $R^2$	0.0587	0.0385	0.0596

Standard errors in brackets

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1



# Chapitre 4

## How firm characteristics affect the level of growth constraints

### 1 Introduction

The debate on how the size of firms affects firm growth has become a "classical" question in economic literature. It leads to many questions concerning how different large firms and small firms affect the development of the country. In fact, the role of entrepreneurship in the economic growth and particularly the role of small enterprises are well recognized by the literature on entrepreneurship (Audretsch, 1995).

A majority of empirical analysis have concentrated on factors determining the success of firms in business (Majumdar, 1997, Heshmati, 2001, Papadaki and Chami, 2002, Alvarez and Crepsi, 2003, Brown and al., 2005, Bigsten and Gebreeyesus, 2007). Less attention has been paid to constraints that entrepreneurs have to encounter with their business activities. However, we still refer to some analysis of Sleuwaegen and Goedhuys (2002), Pissarides et al. (2003), Robson and Obeng (2008), Coad and Tamvada (2008), Moghal and Pfau (2008).

Before, a great number of studies have been carried out for firms in developed countries. In recent years, thank to the increasingly important role of developing countries in the worldwide economy and the availability of data, development of firms in these countries have received much more attention of economic researchers.

Beside the critical role in introducing new products and new techniques into the market, micro and small firms in developing countries are seen as an effective tool in

creating job and welfare, therefore a way to run out poverty. However, as a way of stamping out unemployment, a non-negligible part of entrepreneurs of MSEs might have not a true "entrepreneur spirits" in the sense that they do not bring about innovations or reform in stagnant markets (Santarelli and Vivarelli, 2006). Furthermore, in many cases, small businesses are considered to be a last resort rather than a first choice (Beck et al., 2005), whenever possible, entrepreneur will exit the market to pursue another career path. Hence, many firms might be less productive than incumbent, entrepreneurs might not care about efficiency, productivity and enlargement of the firms. Together with barriers to growth that small scale firms encounter such as financing access, land for production, lack of management skill etc., this leads to the fact that firms which start off small, stay small and do not have the capability to innovate and invest in new technologies and growth. Indeed, several researchers have raised the question about the "missing middle" in the entrepreneurial network with its related consequences.

Given special characteristics of MSEs and their role in economic development, promoting the growth of MSEs has become an important mission of policy makers in developing countries, Vietnam in particular. However, it is important that the supports of MSEs should not be identified based on the subjective evaluations of policy makers. Furthermore, that we have several policies that fit the demands of each "group" might be more efficient than a "one size fits all" policy. Consequently, we need to know their objectives, abilities, difficulties and what aid are needed before give them any assistance.

In order to enlighten this research area, our chapter aims to answer the question of how characteristics of firms affect the level of growth constraint in business environment in Vietnam. We use MSEs data base extracted from the survey of living standards in Vietnam in 2004, in which information on household business have been collected. The analysis is accomplished by using OLS regression where dependent variables are the level of constraints facing firms in several aspects of business conditions, and explicative variables are firm characteristics.

Our brief results suggest that firm characteristics play an important role in determin-

ing how serious firm growth is affected by business constraints and that they vary a lot amongst the type of constraints facing firms. Firms differ in size, age, regional location and sector provide significantly different answers about the level of constraints.

In the section 2, we provide some theoretical and empirical underpinnings of constraints to growth. Next, background features of enterprise sector and descriptions of the data used in this chapter are presented. Section 4 follows with the definition of variables and summary statistics of the sample of firms. Methodology approach and results are presented in the section 5 and we conclude in section 6.

## 2 Theoretical and empirical underpinnings

In theoretical literature dealing with the factors which affect the creation and performance of firms, three groups of factors have been defined, the characteristics of firm, of the entrepreneur and of the environment in which the entrepreneurs and firms operate. The issue of what personal characteristics make entrepreneurs is widely reported in both theoretical and empirical analysis<sup>1</sup>. The question of which characteristics of firm and its entrepreneur affect the firm performance is also the old one (See Sutton, 1997). From the theoretical research of Ben Ner et al., 1993 and Holmes and Zimmer, 1994, the impact of firm characteristics on performance has been studied via empirical variables such as legal status, ownership status or variables that control for the governance strategies.

In the context of environmental constraints faced by firms, the environmental factors often consist of the existence and functioning of the financial and other markets, the extent of development of infrastructure and the presence of a legal framework , as well as regulation and institution of enforcement (Pissarides et al., 2003). The effect of financial constraints on firm performance and growth does not simply imply the barrier of access to credits or credit cost but also are brought about by the underdevelopment of financial market. Levine (1997) has provided a large theoretical survey on the role of financial sec-

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1. For more information theoretical model see: De Witt (1993), on empirical literature see Blanchflower and Oswald (1998), Le (1999). Citation should not be exhaustive.



tor development on economic growth through better identification of investment projects, better availability and lower cost of external financing to firms, improved risk taking, and technological innovation. Rajan and Zingales (1998) present empirical evidences from a large sample of countries, which show that firms needing external finance tend to develop more slowly in countries with less-developed financial markets. Similarly, Pissarides et al.(2003) show that constraints on external financing limit, in important way, the ability to expand production in the case of Russian and Bulgarian small and medium firms. However, Johnson et al. (2000)(2000) find in a survey of private manufacturing firms in Poland, Romania, Slovak Republic, Ukraine and Russia, that the absence of external financing does not prevent firms from investing. They conclude that the financial constraint is not restrictive in that internal finance can substitute for external finance. Similar results are found in the studies of Johnson et al. (1999) and Brown et al.(2004). According to Brown et al.(2004), some aspects of institutional environment - property rights, contract enforcement, efficient regulation- may be important determinants of small firm growth and perhaps more important than financial access.

In regard to the effect of other components, in the context with environmental constraints facing firms, the legal framework, regulation and institutional enforcement; Covin and Slevin (1989) state that external environmental factors might have a strong impact on small firm viability, growth and performance. They also find that the performance of small firms is positively related to the entrepreneurial strategic posture or entrepreneurial orientation (EO) in other word, which, in turn is strongly affected by socio-economic environment of enterprise. The positive relation between the EO and firm performance are also found in the study of Wiklund (1999). It should be noted that not all small entrepreneurs have “EO” which has traditionally been viewed as innovative actions, risk-taking and proactive, therefore determinants of EO is also an important field of research in entrepreneurial literature. Dickson and Weaver (2008) provide a theoretical framework in which the role of institutional environment in determining firm behavior towards entrepreneurial orientation is analyzed. They show that the choice of an EO may be sig-

nificantly motivated by legal system and regulative forces of institutional environment.

With regard to the role of infrastructure on growth; it is generally accepted that infrastructural development affects economic growth. Infrastructure has often been seen as increasing productivity and attracting business activity by lowering transport and production costs and facilitating market access. Canning and Pedroni (2008), using a panel of cross-countries from 1952 to 1990, find that infrastructure development tends to cause long run growth and the effect of infrastructure development on growth varies across countries. Similar results are found in empirical studies of Egert et al. (2009) who focus on the role of physical infrastructure e.g. transport, electricity and telecommunication in economic growth for a sample of OECD countries.

## 3 Data

### 3.1 Some background features

Panel A of the table (4.1) provides a simple view of the role of the private sector (or non-state sector in other words) as a major job-maker in the labor market. It is important to note that labourers in agricultural activities are included in private sector. Panel B gives more detailed information on the distribution of non-state workers, including workers in foreign investment sector, by kind of economic activities. We retain activities whose share of workers is closed to 1 percent or higher. Unfortunately, we do not have statistics for the private sector without the foreign investment sector share. Outputs in panel B are author's calculation from statistics of total employed population and the distribution of employment in the state sector by kind of economic activities. The share of workers in agricultural is still dominant but a decrease in trend is observed. Workers in manufacturing and in wholesale, retained trade, repair of motor vehicles, motor cycles and personnel and household goods take the second and the third largest share of employment. The higher growth of employment in manufacturing activity might be due to the equitization or privatization in other words of state owner enterprises. With

regard to the service sector, a majority of labourers are found in 3 kinds of activities: hotel and restaurants; transport; storage and communication; community, social and personal service activities. We pay little attention to education and training and health and social work activities. The share of non-state workers in these activities is small but its growth rate is rather rapid. From 2000 to 2007, the number of non-state workers in education and training service was doubled, and that in health and social work increased almost fourfold. This growth has partially represented the improvement of living standards in Vietnam.

To some extent, these statistics imply that a larger part of non-farm private labourers often work in small or medium sized businesses. The table (4.2) and (4.3) provide clearer evidence of this statement. It has to be noted that firms in the census all have formal status. Informal firms often escape from this kind of survey due to sampling method. The business society is dominated by non-state firms in term of number of firms. Beside this, the net turnover of non state firm (table 4.4) has increased significantly between 2000 and 2006, in term of proportion. The share of net turnover of non state firms has risen from 25 percent to 41 percent, while that of SOEs has fallen from around 55 to 35.8 percent. In terms of growth rate; during these 7 years, net turnover of non state firms in current price have increased more than fivefold and taken the leader role in economic growth. One can say that this increase has resulted from the privatization process of SOEs<sup>2</sup>. Obviously, this was part of the increase, but the growth rate of net turnover of limited and private companies, which we can say created mainly by private agents, has increased more than 5.3 and 3 times respectively, higher than growth rate of state sector. Furthermore, their share in net turnover of non-state sector is 3 times higher than that of joins-stock companies, which are partly privatized SOEs. To summarise, the private sector has played a more and more important role in the economic growth, job creation, and poverty eradication process in Vietnam.

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2. For more detail on privatization of SOEs in Vietnam, see Sjöholm (2006)

## 3.2 Data description

In this study, we use the Vietnam Household Living Standard Survey in 2004 conducted by General Statistics Office (GSO) of Vietnam. The 2004 version is the only one of the living standard survey series in Vietnam, where information on household business history is collected, especially in section 10. Among other information, it provides a ranking of business climate or in other words, barrier to growth of micro and small firms in Vietnam. Data collected from around 9000 households all over the country shows that more than 4000 non-farm business activities have been reported and that multiple activities can be carried out in some households. Consequently, more than one third of Vietnamese households run at least one non farm business of one kind or other.

In this chapter, the relation between the firm's characteristics and barriers to firm growth, in the case of micro and small enterprises, is considered. We restrict our study to non farm business activities. Within the framework of a household survey, business activities in our sample are often in very small size, therefore the large amount of information which can be collected, in the case of large enterprises can not be reported or are equal to zero, in the case of small enterprises. Hence, to reduce the missing values of the data, we exclude from this analysis all business activities which are not carried out in a fixed location, and which are run for less than three months per year.

It should be noted that, due to the definition of the firm growth in our study, the firms which were created between 2002 and 2004 (the moment of this survey) are not included in our sample.

Our final sample consists of observations covering 8 regions of the country. We run our analysis on both the urban and rural areas, full time operating as well as part time operating firms.

## 4 Variables and descriptive analysis

Definition and some descriptive statistics of the variables used in our estimations are presented hereafter.

### 4.1 Variables and definition

Obstacles that firms have to face during their growth process are measured by a series of questions of a 7-point scale. Firms are requested to rank the 17 constraints in ascending order of hurdle, from 1 "No hurdles" to 5 "Serious hurdles" and the last two answers 6 "Irrelevant" and 7 "Unknown". Summary statistics are provided in the table (4.5).

The table (4.5) shows that the share of firm ranking a constraint as "major" or "serious" is very low. The number of firms reporting a constraint as "irrelevant" or "no hurdle" is very high. This result seems unsurprising because of the fact that our survey is consisted of very small sized firms. As business activity could be a livelihood or a way to run out of unemployment, firm owners have less or no concern for business environment.

As we can not determine the rank of "unknown" answer in accordance with the ascending degree of hurdle, we leave out observations with "unknown" answers. Answers are re-ranked from 1 "Irrelevant" to 6 "serious hurdles". Our answer system is therefore close to the Likert-type scale of 6 points.

Although the constraints to micro and small firm growth can be distinguished by many single factors, for example: the 17 obstacles in our survey, but without loss of generality, these factors can be gathered to measure larger compositions of business constraints such as infrastructure, financial access and burden of legal system etc.

In our exploratory data analysis, we find that 17 items measuring the level of constraints to firm growth have close relation. The overall Cronbach alpha coefficient of these items is 0.9 which is relatively high. Since these answers are closely related, we doubt the fact that the firm owner's ranking of constraints to growth is highly influenced by their just previous response.

The simple correlation among 17 items (table 4.6) seems not to confirm our hypothesis.

Even if the correlation coefficient of a couple of side by side variables is often the highest coefficient in the correlation matrix, the difference in absolute value with other coefficients is not very important in all cases. On the other hand, the number of cases where the correlation coefficient is not the highest is not negligible. The table (4.6) also supports our argument about gathering items into smaller numbers of composition. The correlation coefficients among some groups of items are higher.

The principal component analysis (PCA) has been carried and 4 factors have been retained from the process. The figure (4.1) shows us the plot of Eigen value of PCA. The table (4.7) then provides the rotated factor loading and unique variance of 17 items. The first factor (*INSTITUTION*) represents the level of constraints related to regulations on trading and custom, inconsistency in economic policies and instability of the macro economy including inflation, exchange rate and corruption. That how financial access, financial expenditure, taxes and business registration and operation license bothers business operation and development is measured by the second factor (*FIN-TAX-license*). The third factor (*SOCIAL - INSTABILITY*) shows firms owner's evaluation toward obstacles caused by crime, lack of security and unfair or unhealthy competition. Constraint to firm growth due to infrastructure conditions including electricity, communication and postal services, transportation and land for production and business purposes, is represented by the last factor (*INFRA*)

To verify the robustness of the PCA results, we have also calculated the Conbrach's alpha coefficient for 4 factors. The results are respectively 0.83, 0.79, 0.75 and 0.64 for factor 1 to factor 4. It should be noted that it is not easy to determine the "should be" in Conbrach's alpha value. The last value of alpha that we have obtained is relatively smaller than the conventional value of 0.7. However, we still retain the factor 4 as it represents clearly the degree of infrastructural constraints encounter firms.

Included in explicative variables are characteristics of firms themselves and of their entrepreneurs.

The firm age (*Age*) is represented by a set of dummy variables according to the year

of creation interval (table 4.8). Two important benchmarks, according to which firm age interval is chosen, should be of interest. Firstly, in 1986, Vietnam has carried out its program of economic reform. From then on the private sector has been formally recognized in Vietnam. Secondly, for the last interval of firm age, we choose the 2000 because the law on enterprises in Vietnam came into force in this year.

As for the role of size in firm performances, the literature on the role of firms is not conclusive. Numerous researchers find a negative relationship between age and the growth of firms<sup>3</sup>; some others however reports a contradictory results<sup>4</sup>. The literature on the relation between the size and the performance and survival of firms does not provide us a very simple clear result (Evans, 1987a, b, Audretsch, 1995, McPherson, 1996, Hesmati, 2001, Liedholm, 2002) but still, size is always an important determinant of firms growth and of constraints facing firms in their business (Sleuwaegen and Goedhuys, 2002, Robson and Obeng, 2008, Coad and Tamvada, 2008, Moghal and Pfau, 2008).

We use variable (*LogNumber*) to capture the size of firm in terms of regular labour, including firm's owner, in logarithm value. One exception should be revealed in particular. That is the case of a firm with 112 regular labourers but not "registered". This "outlier" is not included in our estimation.

The firm size in terms of revenue is represented by variable (*Income*). As usual, firm revenue is measured in logarithm scale. Consequently, firms suffering from lost - negative revenue- can not be used in the sample. It must be noted that this is one of several problems that econometric method has not been able to solve yet in empirical analysis (Parker, 2003).

As found in the research of Bartlett and Bukvic (2001), the performance status of firm might be associated with some special constraints. The variable (*Growth*) measures the qualitative variation of firm revenue between 2004 and 2002. It could be not the most suitable measurement of firm performance but it is the only one we have to hand. The

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3. Negative relation between firm age and firm growth is found in Liedholm(2002), Dollar et al. (2005), Sleuwaegen and Goedhuys (2002), Coad and Tamvada (2008).

4. Positive relation between firm age and firm growth is reported in Das, (1995), Heshmati, (2001), Nichter and Goldmark (2008).

state of firm performance is captured by a nominal variable which is equal (1) if the firm reported an increase in revenue, (2) if the revenue was unchanged and (3) if the revenue decreased. Consequently we obtain 3 dummy variables. As mentioned in the study of Nguyen(2004), we are not able to take into account some aspects of subjective valuation of the respondent of the firm (for example : the answer “unchanged” can correspond in fact to a weak increase).

The survey that we use covers registered, informally registered and informal firm. The second refers to household firms that are not officially registered with provincial authorities under different establishment and enterprise laws but with district authorities. They can often neither register their company seal with the local department of Police, nor demand for a tax code at the local Department of Taxation. Therefore, they can not produce VAT invoice and consequently their tax payments can not be calculated on the basis of their invoices. The amount of tax payments are negotiated between the “owners” and tax officials (Freeman and *al.*, 2005)

It is of interest to note that statistics in this analysis are draw from a household survey base. Hence, this sample is not really representative of the micro and small firm population in the country including household firms registered or unregistered, private firms, limited liability firms and shareholding firms. Unfortunately, we do not have any mechanism such as a weight value to correct this sample bias. The dummy variable (*Registered*) is used to represent legal status of firm. It is coded 1 if firms is registered (including formally and non formally registered firms) and otherwise 0 (including informal firms)

The financial access is captured by a dummy variable. (*Credit access*) is equal 1 if household has only borrowed from bank and 0 otherwise. For this dummy, we are not able to identify in which business activity loans are used in case there are more than one business operated by household’s member but we can only know that they are used for a non farm business activity. We assume that the households and firms must comply with conditions imposed by the banking institute in order to get a credit, as a result these



conditions might be related to some particular obstacles to credit access and then to firm growth.

Vietnam is decomposed into 8 economic regions from the North to the South. Regional dummy variables are used therefore to capture these eight economic regions. Dummy variable for rural and urban areas (*Rural*) identified according to the administrative classification of Vietnam is also used in our equations.

Both full-time and part-time operating firms appear in our sample. We consider full-time operating firm as firms which have been run for more than 20 days per month and 9 months per year. Hence, a dummy for full-time operating firm (*Full-time*) is included in our estimations. Business activities can be carried out within households whose members run also other businesses than the activities in question. Consequently, to some extent MSEs results might be affected. Entrepreneurs could help each other or learn from family members. Dummy (*Single*) is used to represent the fact that observed business activity is unique business run by members within the household. Finally, dummies representing economic sectors and provinces are used as control variables.

## 4.2 Descriptive statistics of the data

Summary statistics of 4 factors or, in other words, 4 dependent variables and explicative variables are presented in the table (4.8).

As mentioned above, firms created between 2002 and 2004 are left out in this sample, this section provides only statistics on firms created before 2002 and still in existence at the end of 2004. Consequently, the statistics do not represent exactly characteristics of small firm population in Vietnam but firms with more than or equal two years old in 2004.

The first four variables are dependent variables. Their average values are close to zero. The higher value of the dependent variables, the more serious hurdle firms have to face. The sizes of firms are represented respectively by the two following variables which are in log scale. In terms of decimal scale, the average number of firms' employees in

our sample is 1.75, which range from 1 to 30. Most of firm (87.5 percent) are one-person or two-person firm including the owner (about 60 percent of firms are one-person firms). Regarding the firm income, it range from 62 thousands (equivalent to 5 USD) to 373380 thousands Vietnamese dong (VND) (equivalent to 23 336 USD) with a median value of 8050 thousands VND<sup>5</sup>.

The number of registered firms in our sample is rather small, 24.5 percent versus 75.5 percent. Similarly, about 9 per cent of firms have used a bank credits during 12 recent months. 30 per cent of firms in our sample are seasonal firms. The share of firms in rural and urban area is 66.7 and 33.7 respectively. 32 per cent of enterprises are run in tertiary and secondary sector. 46.7 per cent are commercial firms in detailed sale or wholesale.

Regarding firm age, the share of firm younger than 10 years old is about 50 percent. Most of firms have been created after the economic reform (1986) and the number of micro firm has increasingly risen from then on. It should be noted that the year group 2000 includes only firms created up until 2002. If we include firms created in 2003 and 2004, the share of firms in this group is the highest.

It is interesting to look at the distribution of micro firms across the country. The River Red Delta, Mekong River delta and the Southeast are the 3 most important centers of economic development of the country. The first includes the capital of Vietnam, the third: the biggest center of economic in many aspects. That is why the number of non farm business activities in these regions is the highest and it should be noted that the percentage of microfirms in these regions corresponds to their percentage of population compared to the country population. It is not surprising to see that the share of firms in the Northwest region is the lowest (1.8 percent). This is the region that has had to deal with many difficulties in economic development. Per capita income in the region is always at the lowest level of the country. An other crucial reason for the small number of non farm business is that this region consists of only 4 provinces with roundly 3 percent of country population compared to the Central High Land, the North and South Center

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5. The exchange rate was roundly 16000 VND/USD in 2004

Coast with 5.7, 12.8 and 8.5 percent of country population respectively<sup>6</sup>.

In regards to the firm performance, about 49 per cent of firms report an increase of total sales. The share of firms has had a total sales decrease is 14.43 per cent. We sort our firm sample into 3 sectors. In general, two third of micro firms have been run in tertiary sector. The share of firms in whole sale and retail is the highest (49.33 percent) and firms in service sector take 21 percent. The rest, 33 percent, is run in industrial sectors.

## 5 Results and discussion on robustness test

### 5.1 Empirical results

In order to investigate the heterogeneity of firms across constraints to firm growth, the four factors resulted from the factor analysis presented above are used as dependent variable. As they are considered to be continuous variable, we carry OLS regression in our analysis. Equation to be estimated is written as follow:

$$y_i = \alpha + \beta X + \epsilon \quad (4.1)$$

where the subscribe  $i = [1, 4]$  captures four factors;  $X$  is a vector of firms characteristics as presented in the variables section and finally  $\epsilon$  is residue. Our approach is similar to Sleuwaegen and Goedhuys (2002) for Ivorian firms, Robson and Obeng (2008) for Ghanain firms, Coad and Tamvada (2008) for Indian firms and Moghal and Pfau (2008) who analyse Pakistani firms.

As firms in our sample consist of 3 groups: firms whose turnovers have increased, have been unchanged and have decreased compared to 2 years ago (turnover in 2004 vs. 2002). The small table (4.9) provides us a descriptive relation between the turnover status and constraints to growth. In terms of average value, the level of constraint to growth varies a lot across growth status of turnover. In general, firms having good performance have reported higher level of constraint compared to other growth status. In term of median

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6. Statistics are calculated for 2004 from GSO data at: [www.gso.gov.vn](http://www.gso.gov.vn)

value, the difference among firm group is smaller but it should not be ignored. We suppose that turnover status of firms must have particular impact on the evaluation of constraint to firm growth that dummy variables for each group of firm could not capture totally different effects of turnover growth status. Furthermore, the test of omitted variable does not support the use of growth status as dependent variable. Therefore, we run separate regression for each of group of growth status.

Regression results are presented in the tables (4.10 - 4.13) for four factors respectively. For some regressions, we include the square of employees number or income as we detect the nonlinear relation between the level of constraint to firm growth and the size of firm. We discuss principally significant results in regressions.

### **Institutional constraints**

In the table (4.10), the dependent variable is constraint in institutional condition. In general, it seems that there is not relation between the size of firm and institutional constraints including hurdle from regulation on trading and custom, inconsistency in economy policy, instability of the macro economy including inflation, exchange rate and corruption. Other important characteristics of firms as for: legal status, having credit access, running in urban location, operating in full time and having only one business within the household, have any significant relations with institutional barriers.

Variables that have a significant sign are firm age, geographic location of firm and sector of activity. With regard to the firms having good performance, firms in three regions in the North of Vietnam have to face more serious constraints in institution compared to other regions. It should be noted that the omitted region is the River Red Delta, one of the most important centers of economic. This result suggests to some extent that institutional condition in regions encountering more difficulties in economic development should be less favourable to the firm growth.

In the group with unchanged turnover, the result reveals that institutional barrier effects are significantly and negatively related to firm growth for firms in younger group

created from 1996. This outcome suggests some positive sign about the fact that micro and small firm have serious concern on their growth. Micro business is not only the way to lower unemployment or poverty.

Regarding the third significant variable, business sector, firms in service activities are less affected by institutional constraints. For three groups of firms, the sign is always negative but significant only in the good performance group.

Other characteristics of firms, particularly our variable of interest: size of firm does not matter to institutional constraints.

### **FIN-TAX-LICENSE constraints**

Results in table (4.11) explain the barrier of financial, tax issues and licensing to firm growth alongside firm characteristics. We find that the size of firm in term of number of employees matters for the degree of constraint facing firms. In contrast to other researchers (Bari et al., 2002 and Moghal and Pfau, 2008), indicate that larger firms held advantages because they are in better position to access financial credit, to have investment incentives and to obtain limited government licenses, our results reveal positive relation between firm size and constraints of tax, financing issues and licensing. It means bigger firms face up to more serious burdens. The sign of firm size in term of income level however is not significant.

The sign of variable "Registered" is consistent with the outcome above. Registered firms complain most about "Fin-Tax-License" issues. As indicated in Moghal and Pfau (2008), this fact can be explained by several reasons. Smaller firms and often non registered firms believe that they will not be welcomed by financial institutions and therefore, they are discouraged to approach formal credit institutions and find other sources of financing such as self financing or borrowing from family or friends. Furthermore, smaller firm is less willingness to take risk so avoiding taking any liabilities related to credit. Bigger and "more formal" firms, still micro and small firms, who can apply for credit, have a lot of difficulties in approaching this source of financing.

Besides, the result of variable "Credit access" seems to be interesting. Its insignificant sign means that there is not statistical difference among firms having obtained bank credit and other firms. Additional information about "Credit access" variable should be provided. Credits that firms have obtained are financed by the poverty eradication program and might not bear the same characteristic as credits in general for firms and then they might not be accessible to every firm. However, its non significant sign implies that even with the "credit access" firms still complain in the same way.

Regarding the age of firm, we find that the youngest firms in the good performance group complain the most about "FIN-TAX-LICENSE" compared to the others. With the aim of enlarging their business, young firms have to encounter with more and more financing access, financing cost, tax and license issues and might find that these conditions are not very favourable to their targets. One more time, the result implies that micro firm owners, particularly younger firms, have real "entrepreneur spirits" while having considerable concern for business constraints and that micro and small businesses should not be always the last choice in the carrier path.

In other group of firm, firm age is not an important factor in determining how firms evaluate constraints of tax, financial issues and licensing.

Burdens of financial and tax issues and license differ statistically significant by firm location. Firms in three regions, Northwest, North Central Coast and South Central Coast complain much less about "Fin-Tax-License" issues in the group having increase in turnover. The sign is negatively significant in the regression. However, in the group of worse performance, firms having decrease in turnovers, the sign of Northwest is positively significant. This outcome seems contrary to the result of "Growing" regression. In fact, because of the small number of observations in this category, it is suggested that this result is strongly bias and not representative for the region. Even though, it reveals the question on how constraints of financial and tax issues and license affect the growth of firms in the "declining" group in the Northwest region.

In the same group, the "declining" group, controls for others characteristics, firms in

whole sale and retail trades complain significantly most about "Fin-Tax-License" constraints. Evaluation of firms in others groups does not differ across sectors. For the purpose of better understanding, which is principle constraints facing firms among financial and tax issues and license, we calculate a simple average value of each item included in the Fin-Tax-License factor for every sector for firms in "declining" group. The result shows that firms in whole sale and retail trades complain most about access tax issues and then financing access<sup>7</sup>.

### **Social-Instability Constraints**

Relationship between complaints against social instability issues including crime, lack of security, unfair and unhealthy competition and characteristics of firms is presented in the table (4.12).

After controlling for other firm characteristics, we find the firm size does not matter in the level of constraint facing firms in the "growing" and "unchanged" groups. Its effect, however seems to be contradictory for firms in the "declining" group. Bigger firms, in terms of number of employees tend to complain less about social-instability constraints, while in term of income level their complaints are much more severe. It should be noted that the degree of significance at 10 percent level is not so much strong then outlier might bias significantly our results. In fact, 4 biggest firms in term of number of labours report a relative lower level of constraints, by discarding these observations, the coefficient of variable "Number of employees" becomes non significant but still negative, while the level of significance of firm income variable does not change. Therefore, the result implies that the degree of hurdle facing bigger firms is more serious than small firm with regard to income level. In terms of employee number, the result is still ambiguous. Large sample might allow us to shed more light on these questions.

Still in the group of firms having bad performance, the age of firms is a significant factor to determining the difference in complaints by firms against social instability issues. It is of interest of repeat that firm created from 1980 onward are omitted in the regression.

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7. Detail results are available by contacting author.

So, younger firms face less constraints of social-instability than the oldest firms in the group. It has to be noted that the coefficient values and degrees of significance do not change much with firm age groups. It implies that the difference in firm's evaluation of constraint level to growth is negligible among firms created after 1980. One might reveal a question on why these oldest firms complain most. In fact, before 1886, private business was not formally accepted in Vietnam, and then it was difficult to a private firm to operate and grow. Consistent with this statement, we assume that the evaluation of the oldest firm's owners is based on their experience in the past and might not be considered their actual problem.

Regarding geographic location, it is interesting to find that firms in two particular regions the Northwest and the Southeast of the country complaint significantly less about social-instability issues with the level of significance of 5 percent at most. Omitted region is always River Red Delta. Firms in some other regions report also negative coefficients but the results are not significant. To some extent, social-instability issues in River Red Delta are severe constraints of firms compared with firms in other regions.

The same results are found in the group with better performance, the "growing" and unchanged groups. The number of significant variables is even higher, especially in the "growing" group. Firm age however does not affect constraints facing firms.

In these two groups, firms in wholesale and retail trades voice louder complaints than those in industrial and service activities at the level of significance of 1 percent.

With regard to other characteristics which affect firm's complaints against business conditions, for the group with the best performance, firms having credit access present more severe complaints than other firms. In the "unchanged" performance group, seasonal or full-time running status affects significantly social-instability constraint levels facing firms. Firms operating in full-time complain less loudly than the rest. For two other groups, the result is also negative but not significant. This outcome is similar to that of the previous section about financial, tax issues and licensing. It suggests weak evidence that firms operating in full time face fewer burdens due to business conditional than



seasonal firms as coefficient are not significant for all regressions.

### **Infrastructure constraints**

Table (4.13) shows how firm characteristics affect the Infrastructural constraint level facing firms. Infrastructure constraints include burdens caused by electricity, communication and postal services, transportation, land for production and business purposes and emitted water and solid disposal treatment. The results show clearly that the size of firms matter significantly constraint level of infrastructure to growth.

The number of employees matters only in the first regression of the table. The size of firm in term of income level is positively significant in all three regressions. The results seem to be obvious. Bigger firms voice louder complaints against infrastructural conditions.

Regarding other firm characteristics, the outcome varies greatly amongst the groups of firms in terms of firm performance. In the "growing" group, firms operating for full time complaint much less about infrastructural constraints. The age of firms appears to be an important determinant of how they evaluate this constraint. The majority of younger firms than omitted firms in the regression complain significantly more about infrastructure. As for two other groups of firm performance, the age of firms is only significant for those created between 1985 and 1990, in the unchanged performance group.

Again, the River Red Delta seems to be an unfavourable region for firm growth. For three regressions, some region dummy variables (the Southeast and North Central Coast) are negatively significant. This means firms in these regions complaint less about infrastructural conditions than firms in the reference region. It should be noted that these negative signs are found in several other regional variables, but unfortunately with no significance. This result, coupled with those in the previous sub-section about social instability constraints, might suggest that firms in the River Red Delta are somewhat more severe about business condition or that business environment of the region is really less favourable to the development of micro firm compared to other regions, even though

this is one of most economically developed areas of the country.

The effect of business sector on how firms view infrastructural constraints corresponds to our expectation. Firms in business activities other than industry are less constrained by infrastructural conditions. Dummy variables for activity sectors are negatively significant in all three regressions.

For the group of firms having decrease in turnover, the infrastructural burdens facing registered firms are less serious. obviously, we find that firm in urban area complaint less about this issue at the level of significance of 5 percent.

Regarding home based multiple business activities: we find different results amongst the two groups of firm performance. In the worst performance group, the decreased group, firms in household with one business activity, complain less about infrastructure. Whilst in the unchanged performance group, firms complain much more.

## 5.2 Test of robustness

As presented in the above section, we use a factor analysis process before investigating the heterogeneity of firms in regards of the barriers against firm growth. One might want to know why we do not run an ordered logit (or probit) regression, as some others researchers have done, with ordered answer data. Firstly, since many of firms in our sample are of "tiny" size. Running a business, in the view of the firm owners, can be seen as a way to run out of unemployment. Therefore, they might have less "entrepreneur spirits" than we thought and fewer concerns about growth constraints. Empirical results in the table(4.5) seem to confirm the statement. The share of firms whose answers are "irrelevant" or "No hurdle" occupies an important part in our sample. The number of firms experiencing "important hurdle" or more serious hurdle is very small in comparison with other answers. Because of the small number of firms in some categories, the use of ordered logit or probit regression is not a suitable solution. For the same reason, the multinomial logit or probit regression could not be used except gathering some outcomes. Secondly, the crucial assumption of this econometric method, the "proportional odds

assumption" is not valid with our data. Consequently, OLS regression is used in our analysis.

For each regression, tests for omitted variable have been run and the results show that there is no omitted variable in our regression.

One should doubt the endogenous relation between barriers to firm growth and results of firm activities in term of income. For the first stage of instrumental variable regression, we run regression of firm income on several variables including firm characteristics and some geographic variables<sup>8</sup>. Most of variables in the income regression are significant and the test of omitted variable supports the absence of omitted variable in the equation. We then carry the instrumental variable regression with firm income as instrumented variable and the test for endogenous. The result does not support the presence of endogeneity in our regression.

## 6 Conclusion

This study examines the problem encountered by firms in the growth process. Different firm characteristics are found to play significant roles in determining the level business constraints which they face and the level of significances vary also along the type of constraints.

For institutional constraints, the firm age, regional location and sector of activities are significant variables which determine the difference in the level of hurdles facing firms in business operations. Firms in three regions in the North of Vietnam, voice louder complaints against institutional conditions compared to other regions. Younger firms tend to complain less than the older ones in the "unchanged" performance group. Lower level of constraint is reported by firms in service activities. However, significant differences are found only in the good performance group.

Regarding financial, tax and licensing issues, firm size in terms of employee number, including the firm owner, matters significantly the level of burden encountered by firms.

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8. Details on regression are available by contacting author.

Bigger firms voice louder complaints than smaller firms, it is important to keep in mind that they are always MSEs. Consistent with this outcome, registered firms also report a higher level of constraints than the non-registered ones. Together with these results, in the group of good performance firms, the significant higher level of constraints facing younger firms suggests that to some extent, micro and small businesses are not always the last choice in the carrier to run out of employment. The effect of regional location varies significantly amongst firm performance groups. Firms in some region complain less about the "Fin-tax-license" issues; it should be noted that these regions are not those in the best economically developed areas of the country. This result might imply that policy makers in these regions have done more than in other regions to encourage the growth of MSEs and perhaps entrepreneurial growth in general. In the "declining turnover" group, firms in whole sale and retail trade and service activities complaint significantly more than firms in industrial activities.

With regard to the social instability constraints, significant relationships between firm size in terms of employee numbers are found only for "declining" performance group. Bigger firms, in terms of income, tend to complain more about social instability constraints than smaller firms. However, the effect of size of firm in terms of the number of employees, remains unequivocal and needs to be re-examined with a larger sample. In other groups, the size of firms is irrelevant determinant in the regression. Still in the "declining" group, the oldest firms complain most about social instability but their evaluations were based on past experience rather than actual realities. Region location of firms is also an important determinant of the level of social instability constraints. Firms in the River Red Delta seem to report high levels of hurdle than firms in some other regions. Sector of activities, credit access and full time status play significant role as well in determining the level of constraints facing firms. However the degree of significance varies according to their performance group.

As for the last factor of constraints examined in this analysis, firm size matters significantly the constraint levels of infrastructure condition. Bigger firms voice louder com-

plaints against infrastructural burdens. Effects of other firm characteristics on the level of constraints usually varies significantly among the groups. Younger firms report a higher level of constraint. Again, the River Red Delta is considered to be a less favourable region for firm growth than other regions, especially the Southeast and North central Coast. As we expect, industrial firms complaint more about infrastructural condition. The same tendency is found for in rural areas.

Overall, our findings support the idea that the one-size-fits-all policy is not appropriate for improving the business conditions of MSEs in Vietnam. Policy makers need to understand the level of constraints facing firms in each economic regions, each group of firms in terms of sector of activity, firm age, firm size etc. The result implies also that MSEs might not only be the last resort of unemployment, but another choice and that micro and small firm owners have real concern on the growth of their firms. Therefore, more and more research on policies aiming to promoting the growth of MSEs in Vietnam is necessary.

## 7 Appendix

Table 4.1: Employed population distribution

(Value in percentage)

	2000	2001	2002	2003	2004	2005	2006	2007
Panel A: Total employed population by ownership								
State	9.31	9.34	9.49	9.95	9.88	9.50	9.11	9.00
Non-state	89.70	89.49	89.01	88.14	87.83	87.84	87.81	87.52
Foreign investment	0.99	1.16	1.49	1.91	2.29	2.66	3.08	3.49
Panel B: Employed population of non-state and foreign sector								
Agriculture	71.11	69.35	67.77	66.28	64.60	62.54	60.40	58.74
Manufacturing	8.40	9.14	9.65	10.48	11.03	12.00	12.83	13.40
Construction	1.88	2.47	2.93	3.14	3.71	3.90	4.35	4.62
Wholesale	10.86	11.08	11.43	11.96	12.32	12.50	12.71	12.93
Hotels, restaurants	1.92	1.91	1.90	1.92	1.92	1.90	1.90	1.95
Transport	2.86	2.80	2.75	2.74	2.68	2.62	2.59	2.50
Other services	0.72	0.77	0.92	0.72	0.83	1.17	1.43	1.75
Education and training	0.43	0.48	0.57	0.63	0.69	0.73	0.86	0.91
Community	1.36	1.42	1.45	1.48	1.54	1.81	2.00	2.16

Panel A: Statistics from GSO, Vietnam([www.gso.gov.vn](http://www.gso.gov.vn))

Panel B: Author's calculation from GSO statistics

Table 4.2: Firm distribution by size in 2006

	Total	By size of employees										Enterprise
		< 5	5-9	10-49	50-199	200-299	300-499	500-999	1000-4999	≥ 5000		
<b>SOEs</b>	<b>3706</b>	<b>19</b>	<b>27</b>	<b>657</b>	<b>1356</b>	<b>398</b>	<b>454</b>	<b>398</b>	<b>356</b>	<b>41</b>		
Central	1744	12	6	161	559	204	254	259	252	37		
Local	1962	7	21	496	797	194	200	139	104	4		
<b>Non-state enterprise</b>	<b>123392</b>	<b>16656</b>	<b>57722</b>	<b>37503</b>	<b>8977</b>	<b>1017</b>	<b>742</b>	<b>526</b>	<b>238</b>	<b>11</b>		
Collective	6219	327	3041	2323	421	49	34	20	4			
Private	37323	10830	15507	9543	1256	97	51	31	8			
Collective name	31	2	11	16	2							
Limited Co.	63658	4699	32158	20523	5031	517	368	255	100	7		
JS Co. w. K. of State	1360	5	53	275	566	147	135	108	71			
JS Co. wo. K. of State	14801	793	6952	4823	1701	207	154	112	55	4		
<b>Foreign I. enterprise</b>	<b>4220</b>	<b>159</b>	<b>231</b>	<b>1205</b>	<b>1344</b>	<b>322</b>	<b>329</b>	<b>334</b>	<b>267</b>	<b>29</b>		
100% Foreign capital	3342	128	180	946	1043	258	255	271	235	26		
Joint venture	878	31	51	259	301	64	74	63	32	3		
<b>TOTAL</b>	<b>131318</b>	<b>16834</b>	<b>57980</b>	<b>39365</b>	<b>11677</b>	<b>1737</b>	<b>1525</b>	<b>1258</b>	<b>861</b>	<b>81</b>		

Statistics from GSO, Vietnam([www.gso.gov.vn](http://www.gso.gov.vn))

Table 4.3: Number of firms by type

	2000	2001	2002	2003	2004	2005	2006
<b>State owned enterprise</b>	<b>5759</b>	<b>5355</b>	<b>5363</b>	<b>4845</b>	<b>4597</b>	<b>4086</b>	<b>3706</b>
Central	2067	1997	2052	1898	1968	1825	1744
Local	3692	3358	3311	2947	2629	2261	1962
<b>Non-state enterprise</b>	<b>35004</b>	<b>44314</b>	<b>55237</b>	<b>64526</b>	<b>84003</b>	<b>105167</b>	<b>123392</b>
Collective	3237	3646	4104	4150	5349	6334	6219
Private	20548	22777	24794	25653	29980	34646	37323
Collective name	4	5	24	18	21	37	31
Limited Co.	10458	16291	23485	30164	40918	52505	63658
Joint stock Co. having capital of State	305	470	558	669	815	1096	1360
Joint stock Co. without capital of State	452	1125	2272	3872	6920	10549	14801
<b>Foreign investment enterprise</b>	<b>1525</b>	<b>2011</b>	<b>2308</b>	<b>2641</b>	<b>3156</b>	<b>3697</b>	<b>4220</b>
100% foreign capital	854	1294	1561	1869	2335	2852	3342
Joint venture	671	717	747	772	821	845	878
<b>TOTAL</b>	<b>42288</b>	<b>51680</b>	<b>62908</b>	<b>72012</b>	<b>91756</b>	<b>112950</b>	<b>131318</b>

Statistics from GSO, Vietnam([www.gso.gov.vn](http://www.gso.gov.vn))



Table 4.4: Net turnover in 2006 by ownership

	2000	2001	2002	2003	2004	2005	2006
<b>SOEs</b>	<b>54.91</b>	<b>51.24</b>	<b>51.15</b>	<b>46.38</b>	<b>41.21</b>	<b>38.85</b>	<b>35.82</b>
Central	39.13	37.27	39.06	35.13	30.99	30.74	28.75
Local	15.78	13.97	12.08	11.24	10.22	8.11	7.07
<b>Non-state enterprise</b>	<b>25.09</b>	<b>29.02</b>	<b>30.35</b>	<b>33.57</b>	<b>37.05</b>	<b>39.44</b>	<b>41.96</b>
Collective	1.20	1.12	0.94	0.88	0.67	0.80	0.71
Private	8.78	8.63	7.69	7.22	7.89	7.99	8.15
Collective name Limited Co.	0.00	0.00	0.23	0.72	0.00	0.00	0.00
JS Co. w. capital of State	13.08	15.23	17.01	18.78	20.61	20.52	21.25
JS Co. wo. capital of State	1.27	2.45	2.46	2.96	3.64	4.81	5.13
<b>Foreign investment enterprise</b>	<b>20.00</b>	<b>19.74</b>	<b>18.50</b>	<b>20.05</b>	<b>21.74</b>	<b>21.71</b>	<b>22.22</b>
100% Foreign capital	7.34	8.01	8.00	9.00	10.74	10.99	12.31
Joint venture	12.66	11.73	10.51	11.05	11.01	10.71	9.92
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Statistics from GSO, Vietnam ([www.gso.gov.vn](http://www.gso.gov.vn))

Table 4.5: Firm owners' evaluation of constraints to growth

	Irrelevant	Unknown	No hurdles	Small hurdles	Noteworthy Hurdles	Major Hurdles	Serious Hurdles	Total
var-a	298	22	2023	344	114	55	15	2871
b	472	37	2086	212	43	14	5	2869
c	260	29	1768	505	220	74	15	2871
d	403	37	1892	306	146	73	9	2866
e	544	65	1944	241	48	21	2	2865
f	562	103	1694	323	131	45	5	2863
g	595	113	1820	262	47	21	4	2862
h	329	74	1957	358	97	48	6	2869
i	350	112	2090	253	40	15	5	2865
j	526	138	2049	129	13	6	2	2863
k	438	107	1730	429	124	32	5	2865
l	780	215	1708	122	24	8	7	2864
m	606	244	1567	311	104	28	5	2865
n	607	326	1516	279	105	27	4	2864
o	804	234	1606	141	43	20	16	2864
p	445	114	1590	444	169	75	28	2865
q	305	145	1424	576	264	121	30	2865

Question to identify the degree of constraint facing firms: how does the following prevent the operation and development of this activity? Var-a: electricity; Var-b: communication and postal services; Var-c: transportation; Var-d: land for production and business purpose; Var-e: emitted water and solid disposal treatment ; Var-f: financial access ; Var-g: financial expenditures; Var-h: taxes; Var-i: business registration and operation license; Var-j: labor regulation; Var-k: skill and education level of worker; Var-l: trading and customer regulation; Var-m: inconsistent economic policies; Var-n: instability of the macro economy; Var-o: corruption; Var-p: crime and lack of security; Var-q: unfair and unhealthy competition.

Figure 4.1: Eigen value plot

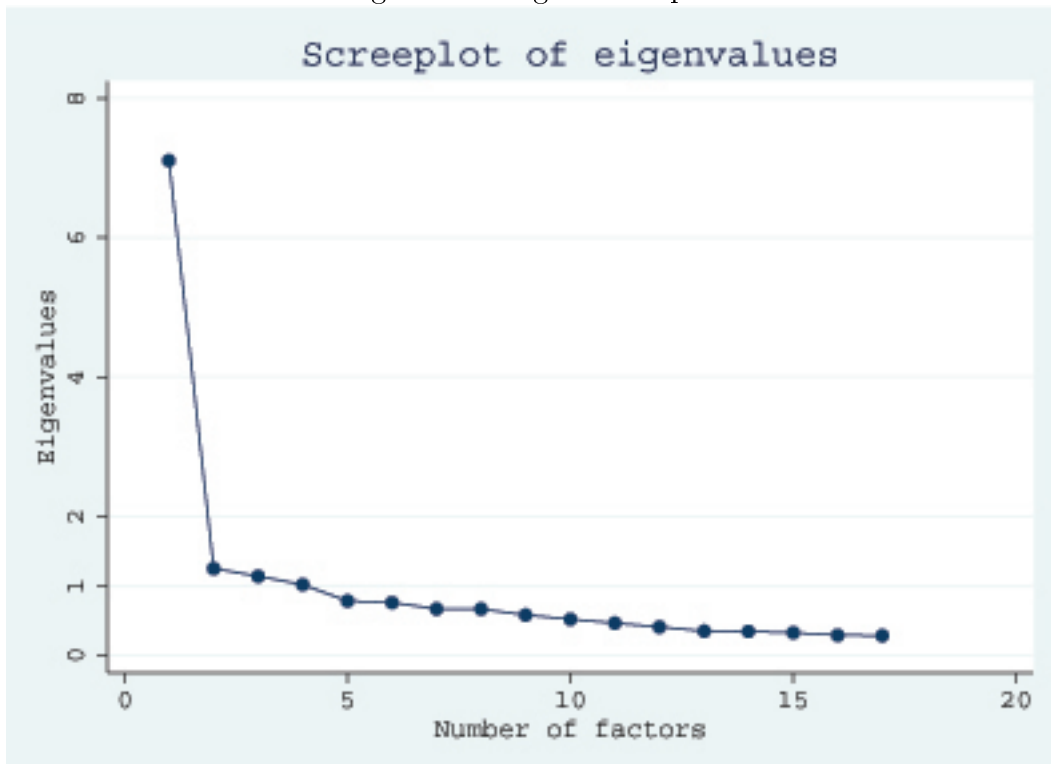


Table 4.6: Simple correlation of constraints to firm growth

	var-a	var-b	var-c	var-d	var-e	var-f	var-g	var-h
var-b	0.41	1						
var-c	0.2261	0.3939	1					
var-d	0.2913	0.3716	0.3022	1				
var-e	0.305	0.4144	0.2578	0.4452	1			
var-f	0.2313	0.3916	0.2703	0.3605	0.4436	1		
var-g	0.2552	0.466	0.2542	0.3637	0.4747	0.6751	1	
var-h	0.2489	0.3003	0.2887	0.3019	0.3541	0.4357	0.4425	1
var-i	0.2615	0.3697	0.2392	0.3197	0.3946	0.4231	0.4588	0.6182
var-j	0.2909	0.4442	0.2693	0.3481	0.4684	0.4486	0.5008	0.3736
var-k	0.3106	0.3777	0.3163	0.3199	0.3409	0.3724	0.3804	0.2611
var-l	0.2111	0.4181	0.2468	0.2679	0.4491	0.4449	0.5277	0.3571
var-m	0.2608	0.3922	0.2888	0.3366	0.4285	0.4013	0.4373	0.3757
var-n	0.2672	0.3971	0.2941	0.3551	0.3846	0.3984	0.434	0.3648
var-o	0.2244	0.4164	0.2246	0.2976	0.4066	0.4033	0.4579	0.3087
var-p	0.2316	0.3585	0.3445	0.3439	0.3254	0.3278	0.3079	0.3493
var-q	0.2155	0.3113	0.3652	0.3016	0.2922	0.3176	0.3051	0.3627
	var-i	var-j	var-k	var-l	var-m	var-n	var-o	var-p
var-j	0.4844	1						
var-k	0.3043	0.49	1					
var-l	0.4133	0.6174	0.3918	1				
var-m	0.3849	0.4738	0.4409	0.5819	1			
var-n	0.3339	0.4337	0.4006	0.5354	0.6707	1		
var-o	0.356	0.506	0.3805	0.578	0.5389	0.5806	1	
var-p	0.3354	0.3116	0.3232	0.3362	0.4823	0.4652	0.5077	1
var-q	0.3238	0.2621	0.3607	0.2367	0.4562	0.4241	0.352	0.61

See explication in table 4.5 for definition of items

Table 4.7: Rotated factor loadings and unique variances

Item	Institution	Fin-Tax-license	Social instability	Infra	Uniqueness
var-a	0.1622	0.1726	0.1766	<b>0.4201</b>	0.7362
var-b	0.3486	0.2502	0.2241	<b>0.4885</b>	0.527
var-c	0.1313	0.1749	0.3611	<b>0.3411</b>	0.7054
var-d	0.2177	0.2698	0.2622	<b>0.3889</b>	0.6598
var-e	0.3938	0.3536	0.1572	<b>0.3454</b>	0.5759
var-f	0.3883	<b>0.5313</b>	0.1267	0.2294	0.4982
var-g	0.4731	<b>0.5424</b>	0.0751	0.2487	0.4145
var-h	0.1908	<b>0.6274</b>	0.298	0.0568	0.4779
var-i	0.2624	<b>0.6301</b>	0.2151	0.1092	0.4759
var-j	<b>0.584</b>	0.3534	0.0712	0.2945	0.4423
var-k	0.3979	0.1707	0.2471	0.3561	0.6247
var-l	<b>0.728</b>	0.2811	0.0853	0.1187	0.3697
var-m	<b>0.6289</b>	0.1789	0.4204	0.0999	0.3858
var-n	<b>0.6152</b>	0.1458	0.4176	0.1108	0.4136
var-o	<b>0.6529</b>	0.1679	0.3046	0.1006	0.4426
var-p	0.3003	0.1685	<b>0.655</b>	0.1165	0.4388
var-q	0.1835	0.2045	<b>0.6622</b>	0.1324	0.4684

See explication in table 4.5 for definition of items

Table 4.8: Descriptive statistics of the sample

Variables	Min	Max	Mean	SD	Obs.
INSTITUTION	-2.567	5.773	-0.013	0.846	1949
FIN-TAX-LICENSE	-3.007	4.955	-0.019	0.795	1949
SOCIAL DESTAB.	-1.989	3.869	0.002	0.790	1949
INFRA	-2.623	3.808	-0.002	0.683	1949
Income (log scale)	4.143	12.830	8.950	1.127	1948
LogNumber	0	4.625	0.359	0.541	1947
	Value	Freq.	Percent		
Registered	0 (No)	1903	75.49		
	1 (Yes)	618	24.51		
Credit access	0 (No)	2281	90.48		
	1 (Yes)	240	9.52		
Rural	0 (No)	1672	66.32		
	1 (Yes)	849	33.68		
Full time operating	0 (No)	778	30.86		
	1 (Yes)	1743	69.14		
Firm age	1944-1980	113	5.82		
	1981-1985	103	5.3		
	1986-1990	213	10.96		
	1991-1995	496	25.53		
	1996-1999	622	32.01		
Economic region	2000-2002	396	20.38		
	River Red Delta	495	25.41		
	Northeast	221	11.34		
	Northwest	35	1.8		
	North Central Coast	234	12.01		
	South Central Coast	208	10.68		
	Central High Land	114	5.85		
	Southeast	297	15.25		
	Mekong river Delta	344	17.66		
	Sector	Industrial	643	33.01	
Whole sale and retail trade		895	45.94		
Service		410	21.05		
Growth	Growing	961	49.33		
	Unchanged	706	36.24		
	Declining	281	14.43		

Table 4.9: Average value of constraints level by firm performance status

Growth status	INS.	FIN-TAX-License	SOC. DESTAB.	INFRA
Growing	<b>0.0264</b> 0.2432	<b>0.0468</b> -0.0610	<b>0.0453</b> -0.2542	<b>0.0439</b> -0.1124
Unchanged	<b>-0.0743</b> 0.2432	<b>-0.1100</b> -0.0610	<b>-0.0565</b> -0.3772	<b>-0.0468</b> -0.1124
Declining	<b>0.0056</b> 0.2769	<b>-0.0136</b> -0.0610	<b>0.0036</b> -0.2938	<b>-0.0494</b> -0.1124
Total	<b>-0.0131</b> 0.2432	<b>-0.0188</b> -0.0610	<b>0.0023</b> -0.2964	<b>-0.0024</b> -0.1124

INS: Institution; SOC-DESTAB. : Social instability; INFRA: Infrastructure  
Standard deviation in normal character

Table 4.10: Institutional constraints

<b>Variables</b>	<b>Growing</b>		<b>Unchanged</b>		<b>Declining</b>	
LogNumber	0.04	[0.0649]	0.06	[0.0796]	-0.113	[0.1178]
Income	0.007	[0.0360]	0.046	[0.0397]	0.033	[0.0562]
Registered	0.096	[0.0693]	0.053	[0.0958]	0.115	[0.1268]
Credit access	0.038	[0.0960]	-0.094	[0.1221]	0.125	[0.1340]
Rural	-0.097	[0.0607]	0.016	[0.0723]	-0.05	[0.1084]
Single	-0.072	[0.0844]	0.084	[0.0958]	-0.149	[0.1542]
Full-time	-0.089	[0.0740]	-0.027	[0.0799]	-0.119	[0.1311]
<i>Firm-age: firms created before 1980 are omitted</i>						
Firmage 1981-1985	0.297*	[0.1725]	0.313*	[0.1609]	0.291	[0.2478]
Firmage 1986-1990	0.224	[0.1576]	0.119	[0.1619]	0.212	[0.2455]
Firmage 1991 -1995	0.148	[0.1478]	0.208	[0.1385]	0.012	[0.2055]
Firmage 1996-1999	0.225	[0.1477]	0.238*	[0.1351]	-0.112	[0.2123]
Firmage 2000-2002	0.201	[0.1480]	0.342**	[0.1398]	-0.064	[0.2303]
<i>Economic region: The River Red Delta is omitted</i>						
Northeast	0.174*	[0.1031]	0.091	[0.1192]	-0.199	[0.1926]
Northwest	0.253*	[0.1331]	-0.314	[0.2204]	-0.179	[0.2374]
North Central Coast	0.176*	[0.1028]	-0.116	[0.1018]	0.407**	[0.1998]
South Central Coast	-0.041	[0.0915]	-0.167	[0.1147]	-0.064	[0.1650]
Central High Land	0.158	[0.1000]	-0.022	[0.1334]	-0.378	[0.2724]
Southeast	-0.062	[0.0995]	-0.082	[0.1041]	-0.207	[0.1487]
Mekong River Delta	-0.024	[0.0864]	-0.063	[0.0996]	-0.267*	[0.1554]
<i>Economic sector: The industrial sector is omitted</i>						
Whole sale and retail	-0.101	[0.0779]	0.008	[0.0732]	-0.127	[0.1198]
Service	-0.275***	[0.0930]	-0.142	[0.0941]	-0.168	[0.1606]
Constant	0.072	[0.3668]	-0.720*	[0.3889]	0.193	[0.5831]
R-squared	0.016		0.003		0.029	
N	958		702		280	
Omitted variable test						

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01



Table 4.11: FIN-TAX-License constraints

Variables	Growing		Unchanged		Declining	
LogNumber	0.193***	[0.0641]	-0.168	[0.1555]	0.302***	[0.1136]
Income	0.000	[0.0357]	0.032	[0.0324]	0.038	[0.0619]
Registered	0.286***	[0.0648]	0.424***	[0.0748]	0.325**	[0.1329]
Credit access	0.105	[0.0929]	0.017	[0.1218]	-0.054	[0.1863]
Rural	-0.077	[0.0559]	-0.033	[0.0628]	-0.007	[0.1056]
Single	-0.018	[0.0744]	-0.035	[0.0812]	-0.046	[0.1319]
Full-time	-0.051	[0.0705]	0.046	[0.0655]	-0.014	[0.1271]
<i>Firm-age: firms created before 1980 are omitted</i>						
Firmage 1981-1985	0.255	[0.1723]	0.02	[0.1242]	0.036	[0.2732]
Firmage 1986-1990	0.239	[0.1647]	0.042	[0.1379]	0.167	[0.2329]
Firmage 1991 -1995	0.218	[0.1560]	0.065	[0.1133]	0.29	[0.2395]
Firmage 1996-1999	0.317**	[0.1570]	0.005	[0.1122]	0.219	[0.2524]
Firmage 2000-2002	0.313*	[0.1610]	0.104	[0.1136]	0.416*	[0.2466]
<i>Economic region: The River Red Delta is omitted</i>						
Northeast	-0.114	[0.0987]	-0.031	[0.0925]	-0.005	[0.1331]
Northwest	-0.332**	[0.1362]	-0.600***	[0.2206]	0.537**	[0.2665]
North Central Coast	-0.147*	[0.0885]	-0.067	[0.0880]	0.122	[0.1678]
South Central Coast	-0.189*	[0.0968]	-0.019	[0.0915]	0.019	[0.1388]
Central High Land	0.011	[0.1146]	-0.119	[0.1077]	0.415	[0.3686]
Southeast	-0.125	[0.0886]	0.039	[0.0954]	-0.043	[0.1491]
Mekong River Delta	0.001	[0.0816]	-0.021	[0.0851]	0.022	[0.1734]
<i>Economic sector: The industrial sector is omitted</i>						
Whole sale & retail	0.054	[0.0714]	0.049	[0.0639]	0.229*	[0.1243]
Service	0.024	[0.0834]	0.019	[0.0813]	0.055	[0.1329]
LogNumber2			0.228*	[0.1214]		
Constant	-0.177	[0.3600]	-0.48	[0.3263]	-0.869	[0.6398]
R-squared	0.062		0.106		0.088	
N	958		702		280	
Omitted variable test						

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Table 4.12: Social instability constraints

<b>Variables</b>	<b>Growing</b>		<b>Unchanged</b>		<b>Declining</b>	
LogNumber	-0.023	[0.0563]	-0.027	[0.0701]	-0.219*	[0.1208]
Income	0.051	[0.0354]	-0.067	[0.2680]	0.117*	[0.0634]
Registered	0.099	[0.0656]	0.112	[0.0875]	0.162	[0.1223]
Credit access	0.185*	[0.1002]	-0.138	[0.1101]	0.004	[0.1417]
Rural	0.021	[0.0582]	-0.015	[0.0660]	-0.121	[0.1084]
Single	-0.033	[0.0743]	-0.085	[0.0900]	-0.063	[0.1439]
Full-time	-0.067	[0.0693]	-0.157*	[0.0808]	-0.006	[0.1008]
<i>Firm-age: firms created before 1980 are omitted</i>						
Firmage 1981-1985	0.090	[0.2007]	-0.016	[0.1311]	-0.531**	[0.2406]
Firmage 1986-1990	0.055	[0.1535]	0.143	[0.1478]	-0.529***	[0.1980]
Firmage 1991 -1995	-0.067	[0.1415]	0.147	[0.1102]	-0.607***	[0.1829]
Firmage 1996-1999	-0.038	[0.1415]	0.062	[0.1040]	-0.522***	[0.1807]
Firmage 2000-2002	0.034	[0.1464]	0.030	[0.1125]	-0.443**	[0.1937]
<i>Economic region: The River Red Delta is omitted</i>						
Northeast	-0.269***	[0.0872]	-0.012	[0.1153]	-0.021	[0.1920]
Northwest	-0.314**	[0.1287]	0.297	[0.2710]	-0.789***	[0.1919]
North Central Coast	-0.221**	[0.0955]	-0.198*	[0.1034]	0.173	[0.1850]
South Central Coast	-0.273***	[0.0982]	-0.381***	[0.0958]	-0.114	[0.1415]
Central High Land	-0.239**	[0.1008]	-0.138	[0.1315]	0.174	[0.2235]
Southeast	-0.297***	[0.0913]	-0.373***	[0.0906]	-0.339**	[0.1399]
Mekong River Delta	-0.243***	[0.0868]	-0.256***	[0.0881]	-0.101	[0.1485]
<i>Economic sector: The industrial sector is omitted</i>						
Whole sale & retail	0.201***	[0.0712]	0.210***	[0.0672]	0.027	[0.1262]
Service	0.035	[0.0800]	0.110	[0.0779]	-0.044	[0.1563]
Income2			0.012	[0.0165]		
Constant	-0.328	[0.3456]	-0.172	[1.0704]	-0.168	[0.6079]
R-squared	0.028		0.069		0.034	
N	958		702		280	
Omitted variable test						

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

Table 4.13: Infrastructure constraints

<b>Variables</b>	<b>Growing</b>		<b>Unchanged</b>		<b>Declining</b>	
LogNumber	0.147***	[0.0519]	0.08	[0.0658]	0.083	[0.0859]
Income	0.053*	[0.0318]	0.088***	[0.0320]	0.081*	[0.0471]
Registered	0.000	[0.0598]	-0.072	[0.0724]	-0.172*	[0.0953]
Credit access	0.062	[0.0733]	0.125	[0.1190]	0.035	[0.0989]
Rural	0.050	[0.0501]	0.041	[0.0606]	0.211**	[0.0915]
Single	-0.099	[0.0707]	0.114*	[0.0689]	-0.250*	[0.1323]
Full-time	-0.148**	[0.0612]	-0.024	[0.0612]	0.066	[0.1066]
<i>Firm-age: firms created before 1980 are omitted</i>						
Firmage 1981-1985	0.399***	[0.1277]	0.252**	[0.1058]	-0.262	[0.2266]
Firmage 1986-1990	0.159	[0.1179]	0.078	[0.1283]	-0.253	[0.2124]
Firmage 1991 -1995	0.251**	[0.1038]	0.108	[0.0952]	0.007	[0.1944]
Firmage 1996-1999	0.272***	[0.1026]	0.12	[0.0941]	0.05	[0.2027]
Firmage 2000-2002	0.248**	[0.1033]	0.034	[0.0985]	-0.079	[0.2024]
<i>Economic region: The River Red Delta is omitted</i>						
Northeast	-0.084	[0.0820]	-0.049	[0.1074]	-0.089	[0.1458]
Northwest	0.239	[0.1799]	-0.258	[0.1680]	0.133	[0.2210]
North Central Coast	-0.038	[0.0812]	-0.111	[0.0801]	0.022	[0.1515]
South Central Coast	0.016	[0.0848]	-0.148*	[0.0867]	0.184	[0.1266]
Central High Land	0.011	[0.0759]	-0.186	[0.1158]	-0.115	[0.2437]
Southeast	-0.132*	[0.0783]	-0.177**	[0.0844]	-0.16	[0.1222]
Mekong River Delta	-0.083	[0.0722]	-0.111	[0.0737]	-0.093	[0.1285]
<i>Economic sector: The industrial sector is omitted</i>						
Whole sale & retail	-0.203***	[0.0645]	-0.129**	[0.0575]	-0.243**	[0.0967]
Service	-0.144*	[0.0743]	-0.149**	[0.0666]	-0.252**	[0.1190]
Constant	-0.468	[0.3177]	-0.889***	[0.3240]	-0.667	[0.4447]
R-squared	0.055		0.026		0.07	
N	958		702		280	
Omitted variable test						

\* p&lt;0.1, \*\* p&lt;0.05, \*\*\* p&lt;0.01

# Chapitre 5

## General conclusion

This thesis emphasizes the development of non farm micro enterprises in Vietnam from the worker's choice to become entrepreneur to the identification of determinants of constraint level to firm growth.

In the chapter 2, we identify empirically the determinants of self-employment supply in the Vietnamese labour market. This is not a very new issue in literature but the pattern of micro firm in developing countries should not be as close to that which is described in the mainstream literature, often consists of empirical evidence in developed countries. We refer to the structural approach in which the earnings differentials of workers are introduced in the model as an explicative variable. The two stage econometric method of Heckman is used to estimate the participation function of workers in the self-employment sector. The alternative is the salaried sector. We first estimate the income equation of workers in both sectors (correcting for selection bias) : self-employment and salaried employment and calculate the earnings differentials of each individual. Next, this is introduced in the structural equation. The analysis is carried out separately for male and female workers as we find significant difference between men and women which can not be represented by a simple dummy variable in the model. Our results show that, pecuniary gain is a significant factor which encourages the participation of male workers into self-employment sector in Vietnam. In contrast, this seems not to be the objective of female worker choosing self-employment sector. Also, educational level has a negative effect

on the choice of male workers. The higher the educational level, the lower the probability is to become self-employed. Age also plays a significant role in the choice of male worker. The propensity to become self-employed is higher for older workers. Regarding, female workers, the number of dependant children plays a positive influence on the propensity to participate in the self-employment sector. Furthermore, the importance of effect differs with the age of children. Our study provides a basis for understanding the determinants of self-employment. This might be helpful for authorities to making adequate policies in the sector.

Chapter 3 proposes an empirical analysis of factors which may affect the performance of micro firms in Vietnam. The relationship between firm characteristics and firms growth or performance have been largely analysed in the literature of entrepreneurship. However, most have often been carried out on sizable enterprises rather than firms of micro size. The micro unit of business, which, in a large number of cases, have several employees, from 1 to 5 including firm owner have been mentioned less. We carry out our analysis on a sample of micro and small firms, of which an important number are informal. Our findings show that the size of firm, in terms of income level, positively affects growth. While, in terms of employee numbers, the effect on growth depends on the equation specification. This result implies, to a certain extent, that bigger firms tend to be in a more favourable state of growth than the smaller in the group of micro and small firms. The reason may be that owners of the larger firms are more concerned by the growth of their firms, so make more effort to grow, while owners of the smaller ones would have less “entrepreneurial spirit”, and therefore, may be less concerned by the development of their businesses. We find also that younger firms tend to have better performance levels than older ones. The effect of the informal status is rather weak. However, informal firms seem to be in the worst state of growth compared to two other alternative groups. Geographical location significantly affects the growth state of firms. Firms in rural areas report better performance than firms in urban areas. The firm performance also varies across industrial sectors.

In recent years, development of micro firms has received a great concern of policy makers in both developed and developing countries. Literature on determinants of firm growth and performance could provide a rich framework for policy making. It is obvious that an enormous number of researches have been carried on firms in developed countries, but, increasing attention has also been paid on firms in developing countries. The chapter 4 of this thesis provides a complementary analysis which may be helpful for policy makers in the context where the “one size fits all policy” is in question. We investigate the heterogeneity of firm across constraints to firm growth. The main hypothesis is that faced with growth barriers, firms bear different levels of hurdles as each one is different. Our empirical findings suggest that firms do not encounter the same level of constraints of growth barriers. This varies according firm characteristics, industrial sector and geographical location. The size of firms matters significantly in the level of constraints caused by financial, tax and licensing factor and by infrastructure factor. Bigger firms tend to voice louder complaint than smaller firms. The empirical evidences show that younger firms complain less about institutional and social disability burdens but more about financial, tax and licensing issues. The level of burden depends also on the business sector of firms. Firms in service sector present less complaint against institutional barriers and regarding infrastructural condition, firms in industrial sector tend to voice louder complaint. The level of hurdle reported by firms varies also significantly among geographical regions.

Empirical results imply, to some extent, that among micro and small firms, bigger and younger firm’s owners tend to have more “entrepreneurial spirit” as they are more concerned with their business environment. Furthermore, it is suggested that micro firms, particularly informal firms have more difficulties in accessing growth support from both the government or private institutions.

Overall, our findings support the idea that the one-size-fits-all policy is not appropriate for improving the business conditions of MSEs in Vietnam. Policy makers needs to understand the constraint level facing firms in each economic regions, each group of firms in terms of sector of activity, the age and size of the firm etc. The result implies also that

MSEs might not only be the last resort of unemployment, but a career choice and that micro and small firm owners have real concern on the growth of their firms. Therefore, more researches on policies aiming to promoting the growth of MSEs are necessary in Vietnam.

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