

## 学位論文及び審査結果の要旨

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## 論文の要旨

This dissertation explores the effects of various governmental regulations and policies on labour market in Vietnam.

The first chapter focuses on the effects of minimum wage regulations on wage and employment in Vietnamese micro, small and medium enterprises. Very little is known about the extent to which wage and employment offsetting behaviours change by firm size to mitigate the detrimental effects of minimum wage regulation. Do micro establishments react more aggressively to minimum wage shocks compared to small and medium establishments? To answer this question, this paper examines the impact of minimum wage hikes on employment and wages in Vietnam's micro enterprises, and small and medium enterprises (SMEs), respectively. In particular, I exploit the differences in the rates of increases in minimum wages across minimum wage regions to identify the effects of minimum wage changes. The findings indicate that minimum wage has greater employment effects on SMEs, but alters employment structure of micro firms.

The second chapter utilizes government's unique transfer to Vietnam's war veterans to estimate casual effects of parental income on children's outcome. Although a positive correlation between parents' income and children's educational attainment is widely observed, it is difficult to tell whether this correlation means a causal link because parents' income is endogenous. I revisit this issue by using exogenously induced variation in parents' income from government transfer to the war veterans. The estimated evidence suggests that parents' income has little impact on children's education. This finding

also implies need for policies other than income support to improve children's well-being as adults in the country.

### **1. The effects of minimum wage hikes on employment and wages in Viet Nam's micro, small and medium enterprises**

Most firms in the manufacturing sector of the Viet Nam economy are micro, small and medium in size. In 2011, 40.6 per cent of the 52,587 enterprises had between 0 and 9 employees (micro), 53.8 per cent had between 10 and 299 employees (small and medium), and only 5.6 per cent had 300 employees and more (large). Among these three classes, the first two firm types provided 41 per cent of the employment share of the whole economy. Tran et al. (2008) provide evidence that micro, small and medium establishments have formed the backbone of Viet Nam's economy, especially in the transition from a centrally planned economy to a market-oriented one. Given its importance, how minimum wage affects micro, small and medium enterprises is a hotly debated topic.

The purpose of this paper is to examine the impact of minimum wage hikes on employment and wages in Vietnamese micro enterprises, and in small and medium enterprises (SMEs). My main contributions are twofold. First, I explore the differences in the effect of minimum wage changes on employment and wages across firms with different employment sizes—micro firms and SMEs—in a developing country setting. Second, I provide more detailed evidence of the effects of minimum wage changes in Viet Nam than in the existing studies (Nguyen 2013; Nguyen 2014), using employer–employee matched data.

Among the issues raised by minimum wage policy, none is as controversial as its effect on employment and wages. The literature on the economic effects of minimum wage regulation is numerous. However, the available literature is mostly based on developed countries (Hamermesh 2002; Gindling and Terrell 2004) where the impact of minimum wages is generally analysed using a competitive labour market model and the imposition of a binding minimum wage certainly leads to disemployment effects. Furthermore, the empirical evidence is mixed. Some find negative effects on employment, as predicted by the theory (Neumark and Wascher 1992; Brown 1999; Fajnzylber 2001; Alatas and Cameron 2008). Others find positive or insignificant effects (Card and Krueger 1994; Lemos 2006; Dube et al. 2010; Allegretto et al. 2011).

For developing countries where the labour market is characterized as dual, an alternative approach is required (Suryahadi et al. 2003). Minimum wage legislation in developing country labour markets is usually thought to have incomplete cover. As a result, there is a large proportion of workers whose incomes are most likely to fall below the minimum. The 'ripple effect' of having a minimum wage predicts that the effect declines with the distance from the minimum for workers who would have been

above this wage legislation. This effect increases with the distance for those below the minimum. Consequently, empirical evidence indicates that the wage compression and employment effects are considerably stronger in developing countries than they are in developed countries (Lemos 2006).

Most of the literature for developing countries is concerned with the direct effects of minimum wages on wage rates, fringe benefits, and employment. Harrison and Scorse (2010) use Indonesian firm-level data to look at wages and employment in foreign-owned textile, footwear, and apparel plants. In response to activist pressure, targeted plants increase their real wages by 10 to 20 per cent. No employment effects have been detected. Fang and Lin (2015) examine the impact of minimum wages on employment levels of potentially affected workers in China. Their findings indicate significant negative employment effects on females, young adults, and low-skilled workers. The most relevant study for this paper is Long and Yan (2016) who examine the impact of minimum wages on employment and fringe benefits (coverage pension, insurance) of affected firms in China. Consistent with economic theory, they find that firms affected by regulation attempt to reduce their expenditures on fringe benefits. Interestingly, adverse employment effects vary across firm size. For large firms, minimum wages have a larger effect on the size of employment but a smaller effect on the structure of workers.

While the literature is abundant in other developing countries (China, Indonesia), studies on the economic impacts of minimum wages in Viet Nam are relatively few in number. Using the basic difference-in-difference framework, Nguyen (2013) finds statistically significant negative employment effects in formal sectors but no evidence of adverse effects on overall employment. Nguyen (2014) assesses employment-level effects from fixed effects approach. Using Viet Nam Enterprise Censuses, he finds a negative employment demand elasticity which is around 0.1 per cent. A positive effect on wages is also concluded in Nguyen (2014). However, only average monthly wages per worker are available in the Viet Nam Enterprise Censuses.

The contribution of this paper is to explore how firm size differentiates in response to minimum wage shocks. Even though both neoclassical and institutional labour economists have offered explanations of why larger employers pay more than smaller employers, the literature on why employers of different sizes respond very differently to the same wage shocks is not fully explored.

Specifically, I examine the impact of minimum wage hikes on employment and wages in Vietnamese micro enterprises and, separately, in small and medium enterprises (SME), exploiting a panel dataset from the 2011, 2013, and 2015 surveys of the Viet Nam Small and Medium Manufacturing Enterprise Survey (SME Survey). In this study, employment effect is examined by implementing the standard fixed effect regression. Different regions of Viet Nam might face heterogeneous economic shocks that are correlated with changes in the minimum wage. As a counter measure, time fixed effects

are allowed to vary across geographical regions. Wage effects are examined by using the ‘employee’ module of the SME survey. In this module, around five individual workers from all job categories of randomly selected firms are interviewed. As a result, a matched employer–employee can be formed. This paper, therefore, provides a more precise measure of effects on wages. With these results, I hope I can advance understanding of the labour market in the country.

I find evidence that overall employment falls following an increase in the minimum wage which is driven by a decrease in full-time regular workers. The disemployment impact is larger and highly statistically significant for SMEs. However, micro firms realign the marginal product of labour with wages by substituting part-time workers for their full-time counterparts. Contrary to expectations, I find little evidence that minimum wage increases in the period 2011–15 raised the wages in SMEs. However, negative effects on wages have been detected in micro firms.

## **2. Family income and educational attainment in Vietnam: A revisit using Vietnam War Veteran status as an instrumental variable**

For many years, most of studies reinforce the basic observation that poor children do worse than rich children on a list of outcomes, including lower test scores, higher dropout rates, or more behavior problems. Consequently, by far most government spending on poverty reduction goes to programs that increase the income of poor families (Mayer, 2012). It is no surprising that the vast amount of Vietnam’s anti-poverty program is also in the form of cash transfers or near-cash transfers.

However, parents’ inability to invest in their children is not the only possible explanation for the relationship between family poverty and child well-being. Other parental characteristics, such as education or traits as ambition, trust, motivation, are pointed out to be associated with their child’s development. Since “household income are not exogenously given” (Akee et al, 2010), in this paper, I reassess the importance of parental income on children’s educational attainment by using exogenous changes in family income, which is resulted from an unique transfer program in Vietnam. I find that parental income itself, in the short term, has no effect on children’s outcomes. This findings, therefore, argue for policies other than income support to improve children’s well being in the country.

A comprehensive framework credits three primary factors affecting the attainments of children: the social investment, parental investment, and the choices that children make given these two investments. Considering parental determinants, family income is often regarded as the best measure of the economic resources available to a child (Haveman & Wolfe, 1995). Unfortunately, an extensive studies in this area has sought to measure the simple correlation rather than a casual effect between family income and children’s schooling outcomes (Acemoglu & Pischke, 2001). In fact, estimates the family income’s effect is greatly reduced when long-term influence of family income (e.g. parental education, type of school

attended previously) is included (e.g. Arnaul et al, 2013; Cameron & Heckman, 2001), which imply that unobserved ability lead to upwardly bias least-squares.

To correct for the bias, some studies use fixed effects estimation strategy (Blau, 1999; Duncan et al., 1998; Levy & Duncan, 1999), others employ a variety of different instruments. Since the former approach fails to capture endogenous transitory shocks (the separation of divorce, incarceration, or unemployment of parents), recent empirical studies have attempted to utilize "natural experiments" and have generally found that instruments variables produce smaller family income's effects than least-squares estimates. Akee et al. (2010) uses the income distribution program, which benefited from Casino profits to Native American families, as an instrument for increases in household income. Loken (2007) utilizes the Norwegian oil boom which only affected a few regions, as a predictor for parental income. Shea (2000) uses father's union and occupational status provided in Panel Study of Income Dynamics (PSID) as measures of household income. All in all, most research find that "an increase in parental income modestly increases the educational attainment of children" (Mayer, 2012). Coincidentally, most of research are built in the context of developed countries. However, the impact of parental resources on children might be higher in developing countries (Shea, 2000) where public investments in schooling and child health is still not high enough.

Vietnam has a unique history as rich and evocative. Many battles and wars had come and gone through the centuries. Therefore, the most noticeable feature of the country's social policy is the variety of important benefits available to veterans and to their families from the Department of National Devotees – Ministry of Labor, Invalids and Social Affairs. These include social insurance, pension payment, as well as education subsidies. An extensive literature examining the effect of family economic resources on child outcomes has been developed in economics. However, omitted variable bias make much of the estimated effect of income is spurious (Mayer, 1997). My contribution is, therefore, provides a study of household incomes which are increased exogenously without regard to parental human capital, ability.

I examine the impact of income on child educational attainment by exploiting a panel dataset from the 2008, 2010, 2012, and 2014 surveys of Vietnam Access to Resources Household Survey (VARHS). In this study, the effect of family income is examined by implementing the OLS estimates with and without fixed effects and IV estimates. Particularly, the interaction between family's war veteran status and year, not war veteran status itself, are used as instruments for family income. I find that family income is significantly correlated with children's school achievement if fixed effects are not controlled for. However, this correlation is spurious and vanished away once I control for fixed effects. Similarly, IV estimation shows the little and insignificant effects on children's outcomes. I comes to conclusion

that what really matters with children's school enrolment is family permanent income.

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### 審査結果の要旨

本博士論文は、ベトナムのデータを用いた労働経済学の論文 2 篇から成る。第 1 章は、地域別の最低賃金の変化が、中小企業ないし零細企業の雇用や賃金に与えた影響を分析している。第 2 章は、ベトナム戦争の従軍者に給付される恩給の変化を所得の操作変数として用いて、世帯所得の変化が子供の進学率に影響するか否かを検証している。以下、各章について概要、研究方法、評価を

述べる。

## 第1章 “The Effects of Minimum Wage on Employment and Wages in Vietnam’s Micro, Small and Medium Enterprises”

ベトナムの中小企業と零細企業の2011, 2013, 2015年のパネルデータを用いて、2010年代のベトナムの最低賃金引き上げの影響を分析している。最低賃金は物価水準などを考慮した4つの地域別に設定され、引き上げのペースが地域ごとに異なることを識別に利用し、企業固定効果や州×年ダミー、州レベルのマクロ経済指標などを制御したうえでの影響を推計している。結果は、零細企業と中小企業では異なる。中小企業では最低賃金の引き上げは、最低賃金規制の対象となるフルタイムの常用労働者の数を減らし、その結果、統計的な有意度は低いものの従業員総数も減少し、平均賃金は変化しない。一方、零細企業では、従業員総数の変化ははっきりしないが、従業員に占めるパートタイム労働者の比率が増加し、これが平均賃金をむしろ押し下げるという結果を得ている。企業規模によって影響が異なる理由としては、従業員の質の差を挙げている。零細企業の従業員は比較的スキルが低いので、パートタイム労働者でも十分代替可能であり、パートタイム労働者の増加を通じて賃金が下がるが、中小企業の従業員には大卒者も多く、パートタイム労働者で代替できないために、従業員数が減って賃金は変化しない。いずれにしても、最低賃金の引き上げが平均賃金を上げる効果はなく、貧困対策としての有効性は疑問である。

本章の貢献は大きく2つある。第一に、最低賃金の引き上げの影響についての先行研究の多くはアメリカをはじめとする先進国のデータを用いたものであり、急速な経済成長の途上にある国のデータを用いた分析は基調である。第二に、企業規模によって影響が異なることを明らかにした点にも新規性がある。

本章は、United Nations University World Institute for Development Economics Research (UNU-WIDER)の公募プロジェクト”Micro, Small, and Medium Enterprises in Vietnam”に採択され、UNU-WIDERが主催するコンファレンスでの報告と、査読を経て、WIDER working paper 2017/95として公表されており、UNU-WIDERが編纂する専門書の一章として公刊が予定されている。公募プロジェクトの選考と、コンファレンス後の査読を経ていることから、レフェリー制のジャーナルに掲載されたものと同等と評価できる。

## 第2章 “Family Income and Educational Attainment in Vietnam: A Revisit using Vietnam War Veteran Status as an Instrumental Variable”

ベトナム農村部で2008年から2012年にかけて実施された、世帯レベルのパネル調査を用いて、世帯所得が子供の就学率に与える影響を推計した。世帯所得は、親の生まれつきの能力や学歴、社会資本など、子供の就学率に影響しそうな他の要素とも相関することが予想されるため、個人レベルでの固定効果を制御するとともに、外生的に世帯所得を変化させる操作変数としてベトナム戦争の従軍者に給付される恩給の変化を用いている。ベトナム戦争の従軍者であるか否か自体は、能力・学歴・社会資本などと相関するが、個人レベルの固定効果を制御した後に残る年毎の変化は外生的なショックとみなすことができる。個人固定効果を制御しない推計では、家計の貯蓄は子供の就学率と強い正の相関を示すが、個人固定効果を制御するとこの効果は消え、操作変数を用いても家計の貯蓄は子供の就学率には影響しないという結果を得た。ここから、短期的な世帯所得の変化が子供の就学率に与える変化は限定的である、という結論を導いている。ただし、固定効果を制御することによって恒久的な所得へのショックはほぼ吸収されてしまうため、あくまでも短期的な所得変化に対しては反応しないということを示している点には留意が必要である。

世帯所得を外生的に変化させる操作変数として、ベトナム戦争の従軍経験を用いるという着想、ならびに分析を可能にするデータを見出してきた点を高く評価できる。また、短期的な所得の変化は子供の就学率に大きく影響しないという結果は、アメリカを始めとする先進国における先行研究と整合的であり、発展途上国におけるエビデンスを提供した点も貢献である。ただし、農村部のデータであるため、所得のデータの信頼性が低く、代わりに貯蓄を用いている点について、より丁寧な説明と貯蓄が所得の代理指標として妥当か否かの検証が必要である。また、教育機関へのアクセスが向上したことの効果を制御するために、地域レベルの変数を分析に加える必要もある。こうした指摘に対し適切に対処すれば、レフェリー制のジャーナルに掲載可能な水準にあると評価でき

る。

以上のことから、本論文審査委員一同は、本学府の博士号審査基準①に照らして、Phan Kim Dung 氏の学位請求論文 *Economic Analysis on Labor Market of Vietnam* が博士（経済学）の学位を授与するに値するものとして、判断する。

注 論文及び審査結果の要旨欄に不足が生じる場合には、同欄の様式に準じ裏面又は別紙によること。