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Firms' Performance, Employment and Poverty during the Economic Slowdown Period in Vietnam

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Abstract

Vietnam has achieved high economic growth and poverty reduction over the last two decades. However the country has experienced economic slowdown in recent years. GDP growth rate within the period of 2009-2012 was about 5 percent, which is considerably lower than the previous periods' growth rate at 7 percent. This study shows that the economic slowdown does not have serious impacts on firms, laborers and households in the short-term. Although firms' revenue, profit and size have declined, the number of firms still increases. Unemployment slightly decreased in the economic slowdown period. Average real wage per hour increased. Laborers are more likely to shift between different sectors and tend to move to the agricultural sector. Household average real income increased at the rate of 3.5 percent during 2010-2012, which is substantially lower than the rate of increase during the period 2006-2008 (at 17 percent). Poverty rate decreased from 14 percent in 2010 to 11.8 percent in 2012.

Key words: Economic slowdown, poverty, livelihood, enterprises, labor, labor shift, sector shift.

JEL classification: O10, E17, E24

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1. Introduction

Vietnam has garnered great achievements in economic growth and poverty reduction for the last two decades. Annual growth rate reached 7 percent within the last 20 years. Poverty rate decreased from 57.4 percent in 1993 to 14.2 percent in 2010. However, the global economic crisis has depressed Vietnam growth rate. Annual GDP growth rate in 2009-2012 was about 5 percent, which is considerably lower than the previous period's growth rate at 7 percent. Even though the poverty rate provided by Ministry of Labor, Invalids and Social Affairs (MOLISA) has declined over the last two years, many reports indicate that other indicators of the economy is getting worse, such as increased unemployment rate and a large number of bankrupt SMEs since 2009 till now.

There are many reasons led to economic slowdown including both internal and external factors. Internal factors include the inefficient operation of State Enterprises, banking sectors and inappropriate investment structures of the economy. The global economic crisis also has negative impact to Vietnam economy as the result of deeper economic integration into the world's economy. Even though economic integration and trade liberalization are considered as an important component to sustain high economic growth and poverty reduction but they could also create short-term negative impact. A shock from the world economy could have negative effect on the poverty reduction progress of a small and open economy like Vietnam.

Economic slowdown brings about different impacts on enterprises and households. For example, labor and firms in construction and financial sectors are likely to suffer more from the negative impact of economic slowdown in the recent years. The identification of the most vulnerable groups to economic downturn plays an important role in socio-economic policy formulation in order to minimize the negative impact.

There are many researches in economic crisis and slowdown. In Vietnam, even though there are a limited number of researches in the impact of economic slowdown to poverty reduction progress, a great number of researches have been conducted on economic slowdown's impact on employment and firms' operation. With regards to poverty and households welfare in the context of economic slowdown, Nguyen (2011) found that low economic growth could depress the poverty reduction progress, which might led to Vietnam inability to achieve its Millennium Development Goals (MDG) on reduction of overall poverty, especially food poverty reduction goal. Riedel (2009) used IMF forecast about Vietnam GDP growth rate to determine the impact of economic slowdown to average income per capita in Vietnam. The analytical results show that economic downturn have long-term negative impact on the average income per capita.

With regard to the effect of economic slowdown to employment, Warren-Rodríguez (2009) used macroeconomic data on GDP and employment to estimate elasticity of employment to growth. The analytical results show that economic slowdown has negative impact on the economy's employment generation resulting in increasing unemployment rate. Nguyen *et al.* (2009) also applied similar method using more updated data in combination with regression-based method using enterprise data collected from the Enterprise Census

within 2004-2006 to study the impact of economic slowdown on employment. The research findings are similar to Warren-Rodríguez (2009)'s finding, the projected unemployment rate will increase (to about 6 to 6.5 percent in 2010) attributed to the shortfall of employment caused by economic slowdown.

Some other researches conducted using case-study approach (VASS, 2009; Dinh, 2009; Anh, 2009; Nguyen, 2009) focusing on employment at craft village, labor market and industrial zone also shows that job opportunities and income decrease while job loss possibility increases.

Despite pessimistic forecast about employment situation, the unemployment rate in Vietnam provided by GSO is still at a low level and has tendency to decrease in the recent years. Unemployment rate was about 2.9 percent in 2009 and decreased to 2 percent in 2012. However, according to Cling *et al.* (2010), unemployment rate might not be the main indicator for the impact of economic slowdown on labor market because informal sector plays an important role in regulating labor supply and demand in Vietnam. The research forecasted that despite of decreased income in informal sector as the result of economic shocks, its labor force will increase by 27.2 percent in 2015. ILO (2012) mentioned that although the unemployment rate in Viet Nam was not high despite the economic slowdown, many workers had little choice but accepting jobs in the informal sector with low income and instability to support themselves and their families.

According to Pham (2009), despite lower employment generation, firms are likely to cut labor working hours rather than have their labor force laid off. Razafindrakoto *et al.* (2011) used data obtained from Labor Force Survey 2007 and 2009 also found that the adjustment mechanism of labor market under economic slowdown is to cut labor working hours and increase of the use of part-time or underemployment workers (labor works less than 35 hours/week despite demand for higher number of working hours).

Assessing the level of impact of economic slowdown on different sectors, Nguyen *et al.* (2009) found that manufacturing was the most affected sector. Employment in service sectors was also significantly affected, especially in Wholesale/ Retail trade and Hotels/ Restaurants. According to Pham (2009), the most influenced sectors are import-export dependent sectors such as textile, leather and footwear, wood production, seafood processing, power accessories and tourism. Small and medium enterprises also suffered from the negative impact of economic slowdown. A survey of 2,500 enterprises conducted by CIEM (2012) shows that 60 percent of survey enterprises believed that their business environment is still under the negative impact of global economic crisis.

To obtain a more updated picture of economic slowdown's impact, this research uses data from recent surveys to analyze the current situation of firm operations, labor and employment and poverty situation in the context of economic slowdown. In particular, the research uses three databases including VHLSS, LFS and EC in order to answer following research questions:

With regard to firms' operation:

- How do the economy and firms perform in the economic slowdown context? Which sectors are the best performers and which sectors experience the lowest growth?
- Do employment and labor salary decrease?
- Facing difficulties in economic slowdown, do firms change their main business? Which sectors attract firms from other sectors and which sectors are the most profitable?

With regard to labor and employment:

- Have underemployment and unemployment rate increased? Labor from which sectors lost their job for the last period?
- Does the number of decent work decrease?
- How is the short-run labor shift? Which sectors are the most attractive and which sector is the least attractive?

Regarding households:

- Do household average income decrease and whether poverty increases in the context of economic slowdown?
- Which type of households could escape from poverty and which type of households possibly fall back to poverty in this period?
- How does the family change its livelihood in response to economic slowdown impact? Which type of livelihood would bring higher income for the households?

This research includes six parts. Part two describes the data sources using in the research. Part three presents analysis on firm operation based on data obtained from EC. Part four analyzes the current situation of labor and employment using LFS database. Part 5 analyze poverty reduction progress and household livelihood in the recent years using VHLSS. The final chapter presents conclusion and some recommendations.

2. Data Sources

Three main data sources were used in this research including Vietnam Household Living Standard Survey (VHLSS), Labor Force Survey (LFS) and Enterprise Census (EC). These are large-scale survey, conducted by GSO. Database used in this research is the most updated data.

Vietnam Household Living Standard Survey

The first data source is VHLSS 2010 and 2012. This survey is conducted by GSO once every two years. The total number of households for each year is 9,399 households, chosen from all provinces/cities in Vietnam and represent for the national and regional levels. VHLSS collect detailed data on many household aspects such as demographic characteristics, education, health care, properties, household income and expenditure. Besides, the survey also collect information related to remittance. This piece of information is important to analyze the impact of economic slowdown on rural and poor households'

income because remittance is a large part in households' total income. VHLSS is often used to analyze poverty, households' welfare and characteristics in Vietnam.

Labor Force Survey

Data using in this research are drawn from LFS 2008, 2010, 2011 and 2012. The survey is conducted by GSO. Survey object are household's member above 15 years old. LFS 2012 also includes survey for child labor from people from 5 to 17 years old. However, in this research, we would not use data from child survey.

The number of observations in 2008, 2010, 2011 and 2012 are respectively 1,469,033, 916,894, 1,110,467 and 746,768. In 2011, sample size was 76,320 households each quarter and 25,440 each month. In 2012, sample size was 50,640 households each quarter and 16,880 households each month in 2012. Especially, there are panel data in 2011 and 2012 between different months, but there is no panel data between each year. All money-related variables are adjusted to fixed price of January 2008 to mitigate inflation effect.

The surveys collect detailed information about the employment of each household member including household information, employment (unemployment, paid job, and non-economic activities), occupation, economic sector and other characteristics such as Health insurance, social insurance, contract labor, working hour, salary and income. In 2011 and 2012, there is additional information about job before quitting job.

Enterprise Census

The research uses updated data from Enterprise Census (EC) 2007, 2008, 2009, 2010, 2011 and 2012. These surveys are conducted on all number of operating firms in Vietnam. The number of observations for EC 2008, 2009, 2010, 2011 and 2012 are respectively 155,771, 205689, 233235, 287896, 339287 and 352206 firms, forming panel data. When calculate data related to revenue, income and wage, price is adjusted to fixed price of December 2007 to mitigate inflation effect.

EC survey provides complete information about the firm's operation including enterprise type, sector, main business, number of staffs, and number of female staffs, salary expenditure and properties. It also collects data about revenue, profit and tax payment.

3. Production and business activities

3.1. Number of enterprises according to economic sectors, ownership and labor scale

Despite many concerns that the economic slowdown will affect the number of newly established business, this number has increased in the recent years. In 2011, there were 340 thousand enterprises in total, which increased about 126 percent as compared to this number in 2007. However, the growth rate has been unstable. In 2008, total number of enterprises rose sharply, at 32.0 percent whereas in 2009, the rate was only 13.1 percent. It can partly be explained that Vietnamese economy started to be affected by the global economic

slowdown. In 2010, the number of enterprises doubled that of 2009. However, the number in 2012 only grew 2.8% as compared to 2011.

Table 3.1: Total number of enterprises and growth rate according to economic sectors

Economic sectors	2008		2009		2010		2011		2012	
	Number	% growth	Number	% growth	Number	% growth	Number	% growth	Number	% growth
Agriculture	8513	248.5	8703	2.2	9121	4.8	10246	12.3	10313	0.7
Manufacturing	39890	25.0	44051	10.4	48689	10.5	56904	16.9	59226	4.1
Electricity, water supply and mining and quarrying	4179	10.7	3017	-27.8	2865	-5.0	3098	8.1	3200	3.3
Construction	28234	34.5	32801	16.2	42654	30.0	44612	4.6	47630	6.8
Retail and wholesale	80430	32.1	90598	12.6	111954	23.6	130012	16.1	131363	1.0
Transportation	7735	-7.1	9854	27.4	15105	53.3	18872	24.9	19753	4.7
Hospitality and catering	7082	16.6	8597	21.4	10176	18.4	12910	26.9	12950	0.3
Financial, banking, insurance and real estate	2067	9.1	2037	-1.5	2665	30.8	2673	0.3	2788	4.3
Information, science and technology, education and health	15220	50.1	17286	13.6	23428	35.5	31685	35.2	32489	2.5
Services	1040	26.4	1581	52.0	2057	30.1	2600	26.4	2665	2.5
Other sectors	11281	33.0	14100	25.0	19072	35.3	25591	34.2	26202	2.4
Total	205671	32.0	232625	13.1	287786	23.7	339203	17.9	348579	2.8

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

In 2011, the number of firms working in “financial intermediary, banking, insurance and real estate” increased at the lowest pace (0.3 percent) among other sectors, which contrasted to the figure in 2010 (30 percent). Construction sector had the second lowest growth rate of the number of enterprises, with the number being at 4.6 percent as compared to 30 percent in 2010. In 2012, this rate was at the lowest for enterprises operating in agricultural sector, “hospitality and catering” sector.

Retail and wholesale enterprises accounted for the largest proportion of enterprises regarding economic sectors – about 38 percent over the period (Table 3.2). Contrasting to this, firms operating in service sectors constitute the lowest proportion, at about 0.8 percent in 2012.

Table 3.2: Proportion of enterprises according to business sectors

Economic sectors	(%) Total number of enterprises					
	2007	2008	2009	2010	2011	2012
Agriculture	1.6	4.1	3.7	3.2	3.0	3.0
Manufacturing	20.5	19.4	18.9	16.9	16.8	17.0
Electricity, water supply and mining	2.4	2.0	1.3	1.0	0.9	0.9
Construction	13.5	13.7	14.1	14.8	13.2	13.7
Retail and wholesale	39.1	39.1	38.9	38.9	38.3	37.7
Transportation	5.3	3.8	4.2	5.2	5.6	5.7
Hospitality and catering	3.9	3.4	3.7	3.5	3.8	3.7
Financial, banking, insurance and real estate	1.2	1.0	0.9	0.9	0.8	0.8
Information, science and technology, education and health	6.5	7.4	7.4	8.1	9.3	9.3
Services	0.5	0.5	0.7	0.7	0.8	0.8
Other sectors	5.4	5.5	6.1	6.6	7.5	7.5
Total	100	100	100	100	100	100

Source: *Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012*

With regard to different types of ownership, private enterprises have made up of 50 percent of total enterprises in Vietnam over the years. The number of private enterprises increased from 77.647 in 2007 to 205.467 in 2012. Private limited liability, joint stock and foreign companies have had the largest growth rate of the number of enterprises, especially in 2012 (Table 3.3). However, the number of state-owned and foreign enterprises decreased in 2012; only private and joint stock companies witnessed an increase in the number of enterprises in 2012.

Table 3.3: Total number of enterprises and growth rate according to ownership

Ownership	2008		2009		2010		2011		2012	
	Number	% growth	Number	% growth	Number	% growth	Number	% growth	Number	% growth
State	3287	-5.9	3338	1.6	3238	-3.0	3294	1.7	3217	-2.3
Cooperative	13597	101.9	12257	-9.9	11954	-2.5	13517	13.1	13214	-2.2
Private	46527	15.0	46677	0.2	47822	2.5	48928	2.3	47939	-2.0
Private limited liability	103079	32.8	123422	19.7	162484	31.7	193272	19.0	205467	6.3
Joint stock	33556	49.4	40389	20.4	55274	36.9	70004	26.7	70208	0.3
Foreign	5625	13.4	6539	16.3	7014	7.3	10188	45.3	8527	-16.3
Total	205671	32.0	232622	13.1	287786	23.7	339203	17.9	348572	2.8

Source: *Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012*

Table 3.4 shows that the number of micro enterprises with less than 10 employees has increased at a faster pace than that of enterprises with larger labor scale. In 2012, the number of firms with 1 to 5 employees went up 12.3 percent, while the number of enterprises with 10 to 300 employees decreased. Firms with more than 300 employees witnessed a slight increase, at around 2 percent in 2012 as compared to 2011.

Table 3.4: Number of enterprises and growth rate according to labor scale

Labor scale	2008		2009		2010		2011		2012	
	Number	% growth	Number	% growth	Number	% growth	Number	% growth	Number	% growth
1 to 5	64121	29.6	72684	13.4	107005	47.2	139978	30.8	157261	12.3
6 to 10	63029	37.5	75345	19.5	83464	10.8	84305	1.0	79742	-5.4
11 to 20	34532	49.3	36281	5.1	41534	14.5	48406	16.5	47784	-1.3
21 to 199	37714	20.2	41748	10.7	48405	15.9	57409	18.6	55728	-2.9
200 to 300	2214	9.7	2362	6.7	2625	11.1	2974	13.3	2925	-1.6
300 and above	4040	2.7	4184	3.6	4690	12.1	4963	5.8	5062	2.0
Total	205650	32.0	232604	13.1	287723	23.7	338035	17.5	348502	3.1

Source: *Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012*

An important question is that whether the number of bankrupt firms increases during the economic slowdown period. In Table 3.5, we used repeated data to estimate the number of enterprise which went bankrupt. In particular, we examine enterprises which were operating in 2007 but having no data in 2008 (Column 2007-2008 in Table 3.5). Even though this figure cannot accurately reflect the actual number of bankrupt enterprises (because an enterprise might suspend their operation or refuse to answer), this can be used as a proxy to exhibit bankruptcy/non-operating situation among Vietnamese firms.

According to Table 3.5, during 2010-2012, the number of enterprise shutting down per year was about 45 thousand. This was the highest number during the period of 2007 to 2012. “Retail and wholesale”, construction and manufacturing sector experienced the largest number of closed enterprises in 2011 and 2012. In 2012, the number of closed enterprises was the highest during 2007-2012. The number of closed down SMEs (less than 200 labors) was relatively high, especially enterprises with less than 10 employees (about 36 thousand closed ones). Moreover, almost closed companies were private limited liability and joint stock ones (accounting for 90 percent of closed companies).

Table 3.5: Number of enterprises no longer in panel data

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Total	27470	40760	29614	45438	45312
<i>Economic sectors</i>					
Agriculture	480	639	626	872	840
Manufacturing	4732	6265	4807	5884	6253
Electricity, water supply and mining	344	1549	519	410	359
Construction	3295	5483	4169	6921	5610
Retail and wholesale	10556	17024	12328	19430	18037
Transportation	2263	1079	816	2182	2333
Hospitality and catering	1113	1159	1247	1378	1906
Financial, banking, insurance and real estate	329	313	170	445	363
Information, science and technology, education and health	2109	3742	2186	4020	4652
Services	207	267	254	476	408
Other sectors	2042	3240	2492	3420	4551
<i>According to ownership</i>					
State	235	283	148	252	238

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Cooperative	793	2245	1192	870	1050
Private	6224	8622	6673	8284	6057
Private limited liability	15234	22148	15399	27252	24861
Joint stock	4630	7132	5683	8474	10988
Foreign	354	330	516	306	2118
<i>In size</i>					
1 to 5	11431	17431	12590	21911	24679
6 to 10	9256	14398	11147	14543	10728
11 to 20	2896	5336	3335	5270	4727
21 to 199	3481	3223	2320	3398	3692
200 to 300	161	106	89	102	144
300 and above	245	253	128	180	179

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

3.2. Enterprises' business activity situation

Revenue and profit

The period of 2007-2012 witnessed a decreased trend in average real revenue of enterprises. On average, an enterprise's revenue was 12.5 billion, reducing around 18.3 percent compared with data in 2008. This figure continuously declined through 2008, 2009 and 2010, with the figures being at -7.3, -8.8 and -8.5 percent respectively. Although revenue growth rate in 2011 slightly increased 0.9 percent, this figure dropped around 3 percent in 2012.

“Electricity and water supply, mining and quarrying” enterprises have had the largest revenue growth rate of profit. Average revenue in 2008 of these enterprises rose 51.6 percent; moreover, in 2009, revenue growth rate was 176.3 percent. The reason for this might be the increase of electricity and water prices during the economic crisis.

Additionally, enterprises operating in financial sector also have had positive revenue growth rate from 2007 to 2011. Average revenue of a company in financial sector in 2011 was 32.5 billion, increasing 40% in comparison with that of 2007. Nevertheless, in 2012 the growth rate of this figure declined 24.1 percent.

Table 3.6: Average revenue of an enterprise according to economic sectors (million)

Economic sector	2008		2009		2010		2011		2012	
	Revenue (million)	% growth	Revenue (million)	% growth	Revenue (million)	% growth	Revenue (million)	% growth	Revenue (million)	% growth
Agriculture	3974	-68.9	3917	-1.4	4392	12.1	4696	6.9	4393	-6.5
Manufacturing	25783	-15.5	25769	-0.1	25969	0.8	26118	0.6	25959	-0.6
Electricity, water supply and mining and quarrying	4707	51.6	13004	176.3	16608	27.7	18679	12.5	19667	5.3
Construction	7850	-16.3	8435	7.4	7494	-11.2	7380	-1.5	6936	-6.0
Retail and wholesale	17564	6.6	13758	-21.7	12705	-7.7	13826	8.8	12969	-6.2
Transportation	13683	22.9	11254	-17.7	9337	-17.0	8350	-10.6	8576	2.7
Hospitality and catering	3847	-12.6	3400	-11.6	3261	-4.1	3111	-4.6	3039	-2.3

Financial, banking, insurance and real estate	28672	23.3	33074	15.4	28429	-14.0	32544	14.5	24686	-24.1
Information, science and technology, education and health	3121	-0.1	3272	4.8	2916	-10.9	2241	-23.1	2518	12.3
Services	999	-15.2	2553	155.6	1460	-42.8	976	-33.2	834	-14.5
Other sectors	8561	-7.8	10021	17.0	7941	-20.8	6548	-17.5	6878	5.0
Total	14852	-7.3	13548	-8.8	12392	-8.5	12507	0.9	12132	-3.0

Note: inflation adjusted price in 2007

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

To study the change in productivity from 2008 to 2012, we calculate average revenue per employee in Table 3.7. The result shows that average revenue per employee in 2012 decreased around 2.7 percent. Firms in financial intermediary and banking, agricultural sector, service sector and “retail and wholesale” sectors experienced a downward trend in average revenue per employee.

Table 3.7: Average profit per employee of an enterprise according to economic sectors

Economic sector	2008		2009		2010		2011		2012	
	Profit (million)	% growth	Profit (million)	% growth	Profit (million)	% growth	Profit (million)	% growth	Profit (million)	% growth
Agriculture	89.3	-26.9	96.8	8.5	110.4	14.1	135.2	22.4	122.4	-9.5
Manufacturing	266.8	1.9	282.5	5.9	298.8	5.8	311.0	4.1	316.5	1.8
Electricity, water supply and mining and quarrying	205.7	47.8	304.2	47.8	338.7	11.3	384.6	13.6	401.1	4.3
Construction	182.7	-0.5	208.9	14.3	206.2	-1.3	185.0	-10.3	185.7	0.4
Retail and wholesale	1525.1	16.0	1211.1	-20.6	1045.4	-13.7	1237.9	18.4	1151.9	-6.9
Transportation	312.8	6.9	294.5	-5.9	330.7	12.3	317.8	-3.9	327.1	2.9
Hospitality and catering	176.7	-6.9	169.3	-4.2	168.5	-0.5	168.5	0.0	159.0	-5.6
Financial, banking, insurance and real estate	1215.2	18.4	935.5	-23.0	1082.9	15.8	1208.0	11.5	963.8	-20.2
Information, science and technology, education and health	213.7	15.4	219.0	2.4	210.6	-3.8	167.4	-20.5	182.6	9.1
Services	73.4	-16.4	230.1	213.6	153.8	-33.2	106.6	-30.7	97.2	-8.8
Other sectors	369.2	1.0	426.5	15.5	369.8	-13.3	326.4	-11.7	331.4	1.5
Total	407.2	10.9	387.2	-4.9	392.7	1.4	414.2	5.5	403.1	-2.7

Note: inflation adjusted price in 2007

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

Similar to average profit of enterprises, average profit also showed a sharp and decreasing trend over the years (Table 3.8). Average profit in 2012 declined about 48% as compared to 2007. Although average profit had a decreased trend, it slightly increased in 2012, with the growth rate of this number being at 4.3 percent. One of the reasons for this was that in 2012 inflation was low, contrasting with other years during the period.

Table 3.8: Average profit of an enterprise according to economic sectors

Economic sectors	2008		2011		2012	
	Profit (million)	% growth	Profit (million)	% growth	Profit (million)	% growth
Agriculture	592.0	-70.2	441.1	-21.4	409.8	-7.1
Manufacturing	1234.5	-31.0	1057.3	-27.2	1052.5	-0.5
Electricity, water supply and mining and quarrying	420.4	22.9	985.3	-36.0	1452.7	47.4
Construction	319.6	-24.6	221.0	-28.7	158.0	-28.5
Retail and wholesale	223.6	-19.6	181.2	-21.5	221.6	22.3
Transportation	1024.9	11.5	312.3	-39.3	297.1	-4.9
Hospitality and catering	512.8	-15.7	262.2	-26.2	256.4	-2.2
Financial, banking, insurance and real estate	5211.3	-20.5	3656.1	-27.4	3409.6	-6.7
Information, science and technology, education and health	219.9	20.3	157.7	-47.8	160.4	1.7
Services	31.9	-60.5	46.9	-2.7	43.4	-7.5
Other sectors	1284.3	-15.6	635.5	-39.7	749.4	17.9
Total	598.0	-26.9	415.8	-30.1	433.8	4.3

Note: inflation adjusted price in 2007

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

To study characteristics of enterprises which have operated through years and bankrupt ones, Table 3.9 shows average profit and profit per employee of an enterprise which have operated over 3 years and bankrupt ones in 2012 (could go bankrupt or merge with another enterprise). The result shows that enterprises (except for financial and banking enterprises) which stopped operating normally have less than 3 years of experiences. Consequently, firms having less operating experiences were more likely to be affected by the economic slowdown.

Table 3.9: Total profit and average profit per employee

Economic sectors	Enterprises have operated 4 years and above				Enterprises closed in 2012			
	Total profit in 2010 (million)	Average profit per employee in 2010 (million)	Total profit in 2011 (million)	Average profit per employee in 2011 (million)	Total profit in 2012 (million)	Average profit per employee in 2012 (million)	Total profit in 2011 (million)	Average profit per employee in 2011 (million)
Agriculture	4828.6	108.4	5694.2	138.0	5255.8	119.7	1699.8	145.4
Manufacturing	36145.2	310.7	39838.3	330.9	40115.8	333.4	7773.3	259.6
Electricity, water supply and mining and quarrying	16126.7	299.8	22273.2	359.3	23695.4	356.4	9598.8	363.5
Construction	11135.6	206.8	11005.6	195.5	10982.3	200.2	4863.8	215.6
Retail and wholesale	18664.1	1158.6	20644.3	1384.2	19530.4	1320.5	8708.4	1147.1
Transportation	13206.4	338.9	12879.6	323.3	13520.1	340.6	4539.3	300.6
Hospitality and catering	4801.8	194.6	5062.2	199.3	4663.6	187.2	822.5	89.0
Financial, banking, insurance and real estate	32563.5	1129.8	36104.5	1222.3	30572.4	936.4	35979.6	1194.8
Information, science and technology, education and health	4511.8	239.7	4030.7	203.2	4559.9	218.1	1050.6	136.5

Economic sectors	Enterprises have operated 4 years and above					Enterprises closed in 2012		
	Total profit in 2010 (million)	Average profit per employee in 2010 (million)	Total profit in 2011 (million)	Average profit per employee in 2011 (million)	Total profit in 2012 (million)	Average profit per employee in 2012 (million)	Total profit in 2011 (million)	Average profit per employee in 2011 (million)
Services	1047.4	73.7	1812.6	140.7	1323.4	102.9	480.2	76.7
Other sectors	13840.3	412.8	12727.6	371.1	12687.9	367.3	3275.3	332.2
Total	18365.1	404.1	19865.0	430.9	19503.0	422.4	6235.8	463.5

Note: inflation adjusted price in 2007

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

Employment structure

Table 3.10 shows that the firm labor size was 47.4 in 2007, which considerably declined to 44.4 in 2008 and continued to decline to 32.6 employees per enterprise in 2012 (decreased more than 30 percent as compared to 2007).

Generally, firms having positive growth rate of profit and revenue (i.e. electricity and water supply and mining sectors) witnessed an increase in labor scale. On the other hand, enterprises in agricultural, manufacturing sectors experienced a sharp decrease in labor size. In 2011, agricultural enterprises laid off about 70 percent of their total workers while this figure for the manufacturing industry was 27.5 percent as compared to 2007.

Table 3.10: Average number of employees according to economic sectors

Economic sectors	Number of employees					
	2007	2008	2009	2010	2011	2012
Agriculture	103.5	44.4	40.4	39.5	34.5	35.7
Manufacturing	123.8	103.8	97.0	95.5	89.8	88.3
Electricity, water supply and mining and quarrying	44.2	43.2	66.6	76.7	76.5	101.2
Construction	50.9	42.9	39.5	36.6	38.9	36.3
Retail and wholesale	13.2	12.2	11.9	13.1	11.8	11.6
Transportation	41.8	47.9	38.2	35.8	29.2	30.1
Hospitality and catering	23.3	22.3	20.4	19.8	18.3	18.9
Financial, banking, insurance and real estate	76.6	86.8	96.6	83.5	116.3	107.0
Information, science and technology, education and health	16.8	14.6	14.5	13.8	13.5	13.5
Services	13.4	13.6	10.8	9.5	9.1	8.5
Other sectors	37.5	28.2	29.8	21.8	20.9	23.2
Total	47.4	39.7	37.1	34.7	32.6	32.6

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

Table 3.11 shows that the proportion of female employee experienced a stable trend over the years. This figure decreased in agricultural sector and increased in some sectors such as construction and transportation. In agricultural sector, female employees accounted for about 38.2 percent in 2007 and this ratio was much lower at 30.2 percent in 2012. On the other hand, the ratio of female employees increased around 4 percent in 2012 (compared with 2007) for construction and transportation sectors. The proportion of female employee during the period from 2007 to 2012 fluctuated from 42 percent to 43 percent, reflecting that women played an important role in the workforce of the whole economy.

Table 3.11: The proportion of female employees according to economic sectors

Economic sectors	The proportion of female workers (%)					
	2007	2008	2009	2010	2011	2012
Agriculture	38.2	30.4	29.5	30.0	29.7	30.2
Manufacturing	57.0	56.5	55.8	56.2	57.1	57.1
Electricity, water supply and mining and quarrying	23.5	24.1	25.7	26.7	27.0	25.9
Construction	13.8	13.8	15.0	16.5	17.9	18.5
Retail and wholesale	38.8	37.9	37.8	37.2	37.2	38.8
Transportation	18.4	18.4	18.5	25.3	22.7	24.6
Hospitality and catering	54.2	54.0	53.9	53.9	53.9	53.7
Financial, banking, insurance and real estate	54.8	55.7	55.1	55.9	51.9	56.2
Information, science and technology, education and health	34.7	34.5	36.4	37.7	37.5	38.2
Services	54.3	51.9	51.6	51.0	48.1	47.8
Other sectors	36.6	33.8	36.2	37.0	36.6	36.1
Total	44.0	42.7	42.5	42.4	43.0	43.3

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

The proportion of employees with social insurance remained stable during the period of 2007 to 2012 (about 57 percent). However this ratio in agricultural enterprises decreased sharply from 67 percent in 2007 to 55 percent in 2012. Economic slowdown also caused this ratio to decline in some sectors like construction and service. On the contrary, the proportion of employees having social insurance in manufacturing, “electricity and water supply, mining and quarrying” sectors increased significantly, at 5.4 percent and 10 percent respectively. This reflects that enterprises affected by the economic slowdown tended to reduce labor with long-term contracts or owed money spent for employees’ social insurance.

Table 3.12: The proportion of employees with social insurance

Economic sectors	The proportion of employees with social insurance (%)				
	2007	2008	2009	2010	2011
Agriculture	67.1	49.6	52.5	50.2	53.0
Manufacturing	68.2	69.8	71.1	73.0	73.6
Electricity, water supply and mining and quarrying	77.5	78.8	86.9	87.4	87.5
Construction	26.5	24.8	25.9	24.8	22.6
Retail and wholesale	39.5	41.8	40.3	43.4	42.3
Transportation	46.5	49.4	45.4	57.0	51.2
Hospitality and catering	52.3	50.8	50.1	50.4	49.2
Financial, banking, insurance and real estate	92.3	94.9	92.2	94.1	94.5
Information, science and technology, education and health	45.6	48.2	47.9	50.8	43.8
Services	43.9	41.0	36.8	36.0	34.8
Other sectors	64.5	64.0	63.4	59.4	51.7
Total	57.6	57.4	57.9	58.4	57.5

Source: Enterprises Census 2007, 2008, 2009, 2010, and 2011

Average real wage of an employee per year had an increased trend from 2007 (Table 3.2). In 2012, this figure was 37.2 million, which rose about 37 percent as compared to 2007. However workers’ average wage in most sectors in 2011 was less than that of 2010, especially enterprises operating in agriculture, transportation, “financial intermediary, banking, insurance and real estate” sectors. In 2012 average real wage rose 10 percent as compared to 2011. One of the reasons for this was that inflation in 2011 was at a very high level (18.6 percent) while inflation in 2012 was only 6.8 percent.

Table 3.13: Average wage

	Average wage per year (million/person/year)					
	2007	2008	2009	2010	2011	2012
Agriculture	30.7	21.2	22.1	35.3	29.2	26.9
Manufacturing	23.1	23.9	26.1	27.8	28.1	33.4
Electricity, water supply and mining and quarrying	35.5	32.2	49.5	51.4	45.8	45.6
Construction	24.4	22.0	25.7	27.6	26.4	29.0
Retail and wholesale	24.8	26.8	30.2	32.1	28.6	40.2
Transportation	34.1	36.7	37.8	51.0	41.3	32.2
Hospitality and catering	23.4	23.4	24.4	27.6	24.2	25.7
Financial, banking, insurance and real estate	79.0	93.1	94.5	101.3	95.9	112.7
Information, science and technology, education and health	41.8	44.6	47.7	49.6	40.9	57.5
Services	17.6	16.7	20.0	16.2	19.9	24.4
Other sectors	41.9	39.9	43.9	41.5	73.7	46.4
Total	26.8	27.3	30.4	33.3	33.4	37.2

Note: inflation adjusted price in 2007

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

3.3. Change in business industries

A major concern arisen was how enterprises could draw up strategies during the economic slowdown. Have they changed their main business activity or changed their labor scale? Did this bring about increase in their profit?

Table 3.14 presents change of firm's main business activity in short-term (1 year) in the period 2007-2008 before the economic slowdown. The result shows that enterprises in service sector had highest proportion of firms changing their main businesses. Besides, there were about 80 percent of enterprises remained in the business; of which financial and banking sectors were the most stable.

Within the period of 2010-2011, under the impact of the economic slowdown, a number of enterprises changed their major business to the others. There was a stronger tendency for firms to change their main business as compared to the previous period 2007-2008 (Table 3.15). While only service sector had more than 10 percent firms shifted their businesses to other sectors in 2007, seven out of ten sectors having less than 90 percent of workers remained in the same sector in 2011. This change was especially high in scientific activities and technology (20 percent) and services sectors (40 percent) in 2011. Firms have high tendency to shift their business to wholesale and retail trade, probably because this sector has easy entry and requires low fixed investment.

Table 3.14 The proportion of shifting firms in 2007 to other economic sector in 2008

Year 2007	Year 2008											Total
	Agriculture	Mining and quarrying, Manufacturing	Electricity, water supply and mining and quarrying	Construction	Retail and wholesale	Transportation	Hospitality and catering	Financial, banking, insurance and real estate	Science and technology, education and health	Services	Other sectors	
Agriculture	93.5	2.0	0.0	0.5	3.0	0.2	0.3	0.0	0.3	0.0	0.3	100
Manufacturing	0.1	95.5	0.1	0.8	2.8	0.1	0.1	0.0	0.3	0.0	0.2	100
Electricity, water supply and mining and quarrying	2.4	1.5	95.0	0.4	0.3	0.1	0.0	0.0	0.1	0.0	0.2	100
Construction	0.1	1.1	0.1	94.5	2.1	0.4	0.1	0.0	1.1	0.0	0.6	100
Retail and wholesale	0.1	1.6	0.1	0.8	96.1	0.4	0.2	0.1	0.3	0.1	0.4	100
Transportation	0.1	1.0	0.0	1.5	5.4	89.5	0.3	0.0	0.3	0.1	1.8	100
Hospitality and catering	0.0	0.3	0.0	0.2	1.3	0.2	96.7	0.0	0.1	0.1	0.9	100
Financial, banking, insurance and real estate	0.1	0.0	0.0	0.1	1.1	0.3	0.1	96.6	0.6	0.0	1.2	100
Science and technology, education and health	0.0	0.8	0.0	2.0	1.6	0.2	0.1	0.0	93.4	0.2	1.8	100
Services	0.0	2.3	0.7	1.0	8.9	0.8	0.8	0.3	2.4	80.5	2.3	100
Other sectors	0.1	0.6	0.3	1.2	3.5	1.4	0.7	0.1	2.7	0.3	89.2	100

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

Table 3.15: The proportion of shifting enterprises in 2010 to other economic sector in 2011

Year 2010	Year 2011											Total
	Agriculture	Mining and quarrying, Manufacturing	Electricity, water supply and mining and quarrying	Construction	Retail and wholesale	Transportation	Hospitality and catering	Financial, banking, insurance and real estate	Science and technology, education and health	Services	Other sectors	
Agriculture	95.3	0.8	0.4	0.3	2.2	0.1	0.1	0.0	0.2	0.0	0.5	100
Manufacturing	0.1	87.7	0.2	1.4	8.1	0.4	0.2	0.0	1.1	0.1	0.7	100
Electricity, water supply and mining and quarrying	2.3	2.5	86.1	2.1	3.9	0.4	0.0	0.0	1.4	0.2	1.2	100
Construction	0.1	2.7	0.1	78.1	9.2	1.1	0.3	0.0	5.9	0.2	2.4	100
Retail and wholesale	0.2	3.9	0.1	1.8	89.1	1.2	0.4	0.1	1.1	0.4	1.9	100
Transportation	0.0	0.9	0.1	1.7	6.5	87.0	0.4	0.0	0.5	0.2	2.7	100
Hospitality and catering	0.0	0.4	0.0	0.4	1.8	0.4	95.0	0.1	0.4	0.2	1.4	100
Financial, banking, insurance and real estate	0.1	0.2	0.0	0.6	3.0	0.5	0.5	84.9	6.8	0.2	3.4	100
Science and technology, education and health	0.0	2.7	0.1	5.4	5.2	0.6	0.2	0.1	80.4	0.5	4.9	100
Services	0.1	4.0	0.4	1.9	18.4	1.6	1.3	0.3	5.9	59.0	7.2	100
Other sectors	0.1	1.5	0.2	2.3	6.8	3.0	1.4	0.3	6.5	0.8	77.1	100

Source: Enterprises Census 2007, 2008, 2009, 2010 and 2011

Table 3.16 analyzes revenue growth rate of enterprises after changing its main business activity. Enterprises, which did not change their main business experienced growth in revenue. Especially, “electricity and water supply” enterprises experienced revenue growth rate of 41.1 percent. Although construction and “scientific information, education and health” sectors did not achieve revenue growth, the decreases in revenue were minor, accounting for 3.6 percent and 2.4 percent.

Firms having their business shifted to manufacturing, construction, “electricity, water and mining” and “retail and wholesale” sectors witnessed an impressive revenue growth rate. Revenue growth rate for transportation enterprises shifting to manufacturing business from 2007 to 2008 was 100.8 percent; this number for firms shifting from construction to “electricity and water supply” business, from transportation to construction and from service sector to “scientific information, education and health” sectors in 2008 was 46.0 percent; 41.6 percent and 154.4 percent respectively.

Table 3.16: Average growth rate of revenue of shifting enterprises in 2010-2011

Year 2010	Year 2011										
	Agriculture	Mining and quarrying, Manufacturing	Electricity, water supply and mining and quarrying	Construction	Retail and wholesale	Transportation	Hospitality and catering	Financial, banking, insurance and real estate	Science and technology, education and health	Services	Other sectors
Agriculture	17.2	14.4	25.9	.	61.0	.	.	.	.	.	-43.5
Manufacturing	30.4	12.0	10.8	15.0	29.9	23.3	3.3	.	-9.9	-24.5	-1.4
Electricity, water supply and mining and quarrying	28.8	19.0	41.1	20.4	49.5	.	.	.	3.9	.	-1.2
Construction	.	18.0	46.6	-3.6	29.3	8.3	5.7	.	-17.2	-8.7	-17.7
Retail and wholesale	14.9	25.2	-19.5	-1.9	13.4	8.4	-11.2	308.4	-4.8	-34.9	14.8
Transportation	.	100.8	.	41.6	68.2	2.6	16.2	.	7.5	.	12.2
Hospitality and catering	.	-7.4	.	.	81.9	1.2	13.4	.	-8.6	.	152.5
Financial, banking, insurance and real estate	.	.	.	.	160.7	.	.	10.1	-16.8	.	-14.7
Science and technology, education and health	.	40.4	.	37.0	53.6	-4.8	10.4	.	-2.4	444.6	27.0
Services	.	6.6	.	-35.5	448.5	.	.	.	154.3	5.5	69.4
Other sectors	.	45.1	-0.0	-8.5	26.4	28.5	31.5	167.4	10.2	31.9	-1.6

Note: cells with “.” contain the total number of shifting enterprises less than 30

Source: Enterprises Census 2007, 2008, 2009, 2010 and 2011

Table 3.17 shows enterprises' main business activity in short-term during the period 2011-2012. The result shows that firms have lower tendency to change their main business within 2011-2012 as compared to the previous year. This change was similar as the period between 2007 and 2008. It can be partly explained by the argument that after the economic slowdown, firms tended to shift their businesses and therefore achieved some level of stability.

Table 3.17: The proportion of shifting enterprises in 2011 to other economic sector in 2012

Year 2011	Year 2012											Total
	Agriculture	Mining and quarrying, Manufacturing	Electricity, water supply and mining and quarrying	Construction	Retail and wholesale	Transportation	Hospitality and catering	Financial, banking, insurance and real estate	Science and technology, education and health	Services	Other sectors	
Agriculture	97.4	0.6	0.3	0.2	1.2	0.0	0.0	0.0	0.1	0.0	0.2	100
Manufacturing	0.1	94.7	0.1	0.9	3.1	0.2	0.1	0.0	0.5	0.1	0.3	100
Electricity, water supply and mining and quarrying	0.4	1.2	95.6	1.0	1.0	0.3	0.0	0.0	0.2	0.0	0.3	100
Construction	0.1	1.1	0.1	93.2	2.3	0.4	0.1	0.0	2.0	0.0	0.8	100
Retail and wholesale	0.1	1.9	0.1	1.3	94.9	0.5	0.2	0.0	0.4	0.1	0.6	100
Transportation	0.1	0.5	0.0	1.1	2.6	93.8	0.1	0.0	0.3	0.0	1.4	100
Hospitality and catering	0.1	0.3	0.0	0.2	1.2	0.2	96.0	0.0	0.2	0.2	1.7	100
Financial, banking, insurance and real estate	0.0	0.1	0.0	0.1	0.8	0.2	0.0	96.5	1.2	0.0	1.0	100
Science and technology, education and health	0.0	1.6	0.1	3.1	1.5	0.2	0.1	0.3	91.3	0.1	1.8	100
Services	0.1	2.3	0.1	2.1	5.8	0.5	0.5	0.1	2.8	81.6	4.1	100
Other sectors	0.1	0.8	0.1	1.6	3.1	1.1	0.5	0.2	2.8	0.2	89.6	100

Source: Enterprises Census 2007, 2008, 2009, 2010, 2011 and 2012

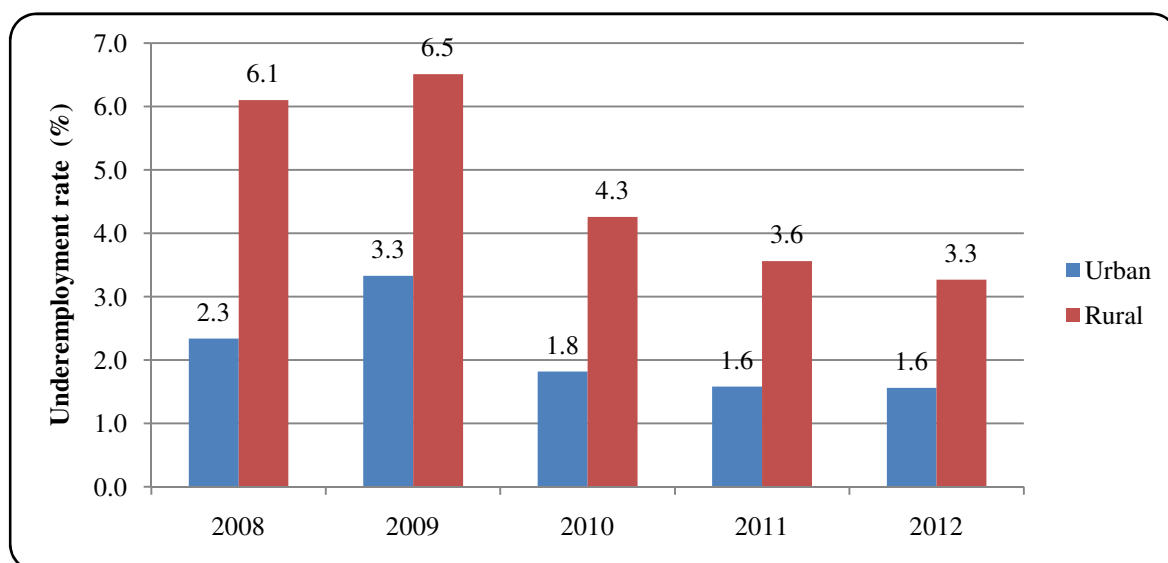
4. Employment

4.1. Employment

There have been rising concerns with regard to the effect of economic slowdown on worsening unemployment (Phan, 2012). However, GSO statistics suggest that unemployment and underemployment rate experienced a declining tendency during 2008-2012 (Figure 4.1). The unemployment rates in urban and rural areas were estimated at 3.1 percent and 1.3 percent respectively, which reflects a situation whereby Vietnamese workers cannot allow themselves to become unemployed due to inadequate social security policies. The underemployment rate in rural area was lower than that in the urban area (3.3 percent as compared to 1.6 percent).

To gain a deeper insight into employment changes in recent years, other characteristics of employment are investigated. While VHLSS covered data on employment, the number of observations was relatively low, especially on waged workers. Therefore, Labor Force and Employment Survey were used to analyze the employment, especially the employment fluctuation since the Survey covered a significantly bigger sample (See Section 2 for data description).

Figure 4.1: Unemployment and underemployment rate (%)



Note: Underemployment is defined as working less than 35 hours per week

Source: GSO

Table 4.1 displays the characteristics of the employment structure, rate of waged workers and the average working hours per week. Generally, there was no notable change in the employment structure by economic sectors. The employment shares of economic sectors slightly changed by 1.0 percent. However, Table 4.1 also shows some effect of the economic slowdown on the labor market. Specifically, the share of workers in agricultural sector increased by 2.5 percent from 44.4 percent in 2008 to 46.9 percent in 2012 (an increase by 1 million workers). This situation implies that economic slowdown raised the risk of losing

jobs in high productivity sector as well as decent jobs (i.e. industry and service) and created negative impacts on the movement of workers from agricultural sector. The proportions of waged workers and average weekly working hours declined but at low rate. The low average working hours per week of agricultural sector even further decreased (42.1 hours in 2008 to 37.6 hours in 2012).

Such industries as retailing, catering and hospitality, and service draw a big share of informal workers and therefore, record a low percentage of wage workers, only from 19.0 percent to 31.0 percent total workers these respective sectors. Other sectors as electricity production, water, mining; finance and banking, insurance and real estate account for a small percentage of workers (less than 1 percent). Nevertheless, these sectors along with information and technology, education and health sectors record high proportions of waged workers of more than 90 percent. The average weekly working hours of all industries were reported to fall among which some sectors recorded sharp decline compared to the average of 48 hours per week. Most notably, there was a decrease to only 37.6 hours per week in the agricultural sector.

Table 4.1: Characteristics and employment structure by industry

	Employment structure by economic sectors (%)			Waged workers (%)			Average working hours (hours/week)		
	2008	2010	2012	2008	2010	2012	2008	2010	2012
Agriculture	44,43	43,53	46,90	6,89	7,63	7,21	42,64	42,12	37,59
Manufacturing	12,96	12,98	12,22	61,04	66,57	67,87	50,43	48,91	47,50
Electricity, water supply and mining	0,75	0,74	0,65	87,19	88,69	89,15	46,28	45,16	44,09
Construction	5,21	6,11	5,61	79,55	85,81	85,81	51,61	49,01	47,49
Wholesale and retail trade;	13,59	13,43	12,64	14,88	17,50	18,80	50,91	48,96	48,31
Transportation	3,76	3,34	2,92	41,32	44,19	45,46	50,76	48,58	48,09
Accommodation and food service activities	4,61	4,71	4,45	15,88	20,12	19,80	48,77	48,03	47,16
Financial, banking, insurance and real estate activities	0,66	0,67	0,71	92,16	90,26	90,15	44,95	44,34	43,66
Information, Science and Technology, Education and Health care	6,08	6,40	6,00	94,03	94,33	94,88	44,34	43,59	41,31
Services	2,09	2,04	1,85	30,07	29,71	31,79	48,52	47,17	46,22
Other activities	5,87	6,06	6,05	88,30	86,88	87,65	44,99	43,93	41,32
Total	100	100	100	32,2	35,14	33,89	46,24	45,18	42,14

Source: Labor Force and Employment Survey

Table 4.2 shows a substantial decline in the percentage of workers working for individual while this number of workers in household businesses recorded a reverse trend. Nevertheless, the average working hours of both groups fell over time reflecting the rising underemployment situation.

Table 4.2: Characteristics and employment structure by economic sector

	Labor structure by sectors (%)			% waged workers (%)			Weekly working hours		
	2008	2010	2012	2008	2010	2012	2008	2010	2012
Working for individual	67,31	49,82	58,45	10,62	6,47	9,39	44,78	42,6	39,09
Household business	9,97	26,33	17,87	30,11	33,49	31,22	52,73	48,85	48,39
Private enterprise	5,82	8,32	7,62	90,46	92,32	91,75	52,21	48,83	48,82
Foreign invested enterprise	1,84	2,3	2,37	99,98	99,86	99,73	52,41	51,56	50,65
State	14,69	13,2	13,43	99,99	99,54	99,52	45,24	44,2	41,78
Total	100	100	100	32,06	35,14	33,89	46,22	45,18	42,14

Source: Labor Force and Employment Survey

Table 4.3 provides information on the average monthly and hourly wage and the proportion of workers with signed labor contracts during 2010 and 2012 (LFS 2008 does not have statistics on these categories). The average hourly wage (adjusted price in 2008) increased from 25% from 9.2 thousand VND to 11.7 thousand VND. Agricultural and service sectors were the only two industries where the average wage fell during that period. Since agricultural jobs are more vulnerable than jobs in other sectors, the total income of agricultural workers remarkably decreased due to the double effects of reduced working hours and lower average hourly wage.

The average wages witnessed a rising trend in all the remaining industries. Most notably, the average wage in finance, banking, insurance and real estate almost doubled in 2 years (9.8 thousand VND to 18.6 thousand VND) which was among the industries with the highest average wage. However, this number cannot fully reflect the total actual income. Even though fixed monthly wage seems to be more accurately recorded through this number, workers' income can comprise bonus and other sources of income which cannot be easily recorded.

Since the average monthly working hours decreased, the average monthly wage rose at a lower rate than the average hourly wage. The average monthly wage increased by approximately 18 percent during 2010-2012. In general, change in average monthly wage showed a similar pattern as that in hourly wage.

The rate of workers with signed labor contracts decreased from 43.4 percent to 41.1 percent. Most industries witnessed a declining trend for the rate of workers with signed labor contracts. The lowest rate was recorded for agriculture while those of electricity-mining, banking finance-insurance-real estate; information-science and technology-education-health care were notably high (above 90 percent) and relatively stable.

Table 4.3: Wage and labor contracts

	Average hourly wage (thousand VND/hour)		Average monthly wage (thousand VND/hour)		% workers with signed labor contracts (%)	
	2010	2012	2010	2012	2011	2012
Agriculture	10,14	9,00	1708,9	1353,2	3,55	4,12
Manufacturing	7,92	9,76	1548,7	1854,4	66,23	64,65
Electricity, water supply and mining	9,80	14,03	1770,0	2474,3	92,08	90,74
Construction	9,11	10,38	1785,8	1971,8	18,03	15,80
Wholesale and retail trade;	9,25	10,41	1811,9	2011,6	29,05	27,62
Transportation	9,83	12,56	1910,5	2416,0	55,21	53,24
Accommodation and food service activities	6,67	8,35	1281,9	1575,1	21,69	19,34
Financial, banking, insurance and real estate activities	9,76	18,57	1731,9	3243,1	95,10	96,84
Information, Science and Technology, Education and Health care	10,03	15,08	1748,0	2491,8	96,19	95,43
Services	8,23	7,49	1552,2	1384,8	16,05	12,13
Other activities	9,91	14,09	1741,0	2328,8	92,08	91,60
Total	9,18	11,66	1658,4	1965,4	43,43	41,07

Note: Wage was adjusted with price in 2008

Source: Labor Force and Employment Survey

Table 4.4 indicates the rate of workers with fringe benefits including social and health insurance. During 2 years, the rates rose with regard to both social and health insurance. Finance, Banking-Insurance-Real estate was the industry with the highest fringe benefits with increasing rates of workers having social and health insurance while those in other industries showed a reverse trend. Electricity-Water-Mining and Information-Science & Technology-Education-Health care were also among industries with good workers' fringe benefits (approximately 90 percent having social insurance and 80 percent having health insurance). The lowest rate of workers with fringe benefits was reported for agriculture where only 17.5 percent and 2.5 percent workers having social and health insurance respectively in 2012. Likewise, the rates of workers having fringe benefits in industries with high proportions of informal workers such as retailing, hospitality and catering and service were notably low, at only 2 percent to 7 percent.

Table 4.4: Workers' fringe benefits

	% workers with social insurance (%)		% workers with health insurance (%)	
	2011	2012	2011	2012
Agriculture	14,92	17,52	3,22	2,48
Manufacturing	60,06	59,87	41,53	41,38
Electricity, water supply and mining	90,08	88,75	83,89	78,56
Construction	15,33	13,89	12,54	11,44
Wholesale and retail trade;	47,09	41,90	7,88	7,34
Transportation	46,55	42,08	20,91	20,51
Accommodation and food service activities	30,37	25,54	4,69	5,12
Financial, banking, insurance and real estate activities	91,56	93,97	80,13	84,94

	% workers with social insurance (%)		% workers with health insurance (%)	
Information, Science and Technology, Education and Health care	96,64	95,91	90,02	89,55
Services	16,35	19,00	2,51	3,45
Other activities	92,56	90,46	78,33	75,83
Total	59,4	57,69	21,99	20,09

Source: Labor Force and Employment Survey

4.2. Skilled and unskilled workers

Economic slowdown affects different groups of workers to different extents. Skills and expertise are two determinants of workers' compatibility in the labor market as well as of their coping capacity to negative impacts of economic slowdown. In Vietnam, the proportion of skilled workers accounted for approximately 17.2 percent in 2010 and slightly decreased to 16.8 percent in 2012. The skill levels vary among industries. While such industries as agriculture, service, construction, wholesale and retailing attract a large percentage of workers, the proportions of skilled workers in these industries were relatively low (Table 4.5). The highest rate of skilled workers was recorded for the industry of Information-Science & Technology-Education-Health care and Finance, Banking-Insurance-Real estate.

Table 4.5: Proportions of skilled workers by industries

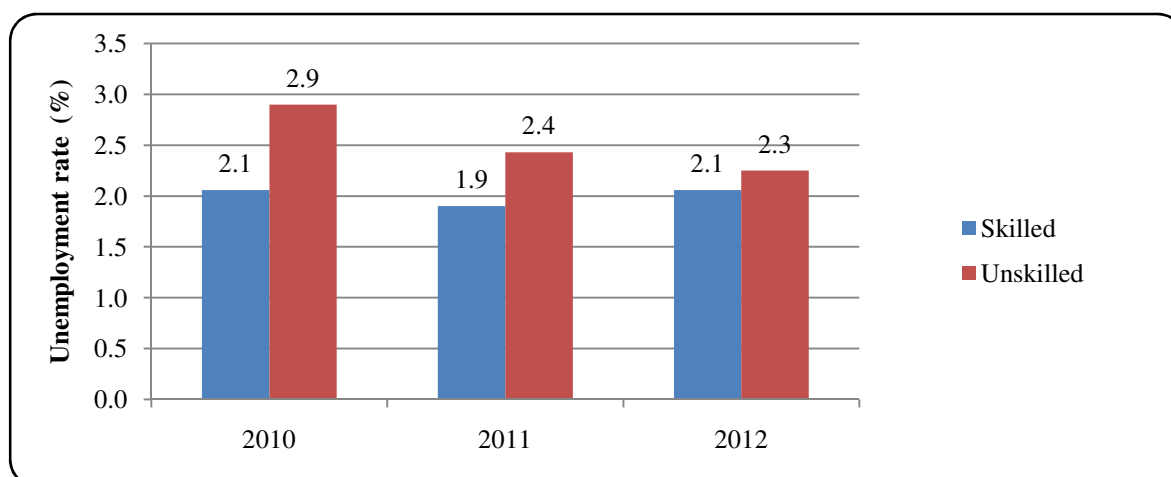
	2010	2012
Agriculture	2,62	2,6
Manufacturing	13,56	14,35
Electricity, water supply and mining	56,87	58,56
Construction	11,86	12,12
Wholesale and retail trade;	12,38	13,6
Transportation	16,88	16,92
Accommodation and food service activities	8,22	9,08
Financial, banking, insurance and real estate activities	78,35	78,89
Information, Science and Technology, Education and Health care	88,58	88,63
Services	9,06	9,55
Other activities	67,9	67,75
Total	17,15	16,82

Note: skilled workers are defined as workers with elementary and advanced vocational training, and higher education.

Source: Labor Force and Employment Survey

The unemployment rate fell in general. Table 4.2 shows the unemployment rate of skilled and unskilled workers. Accordingly, there was a moderate decline in the unemployment rate of unskilled workers while this corresponding rate among skilled workers almost remained constant.

Figure 4.2: Unemployment rate of skilled and unskilled labor



Source: Labor Force and Employment Survey

Table 4.6 and 4.7 compares the average working hours and wages of skilled and unskilled workers. The average weekly working hours slightly fell for both groups, by around 2 hours during 2010 and 2012. The average hourly wage of skilled workers exceeded that of unskilled workers by a margin of approximately 25 percent. However, the actual hourly wage of skilled workers notably rose during this period by nearly 50 percent. Meanwhile, that of unskilled workers only showed a moderate increase and even fell given a decline in their average hourly working hours. The biggest decreases in the average monthly wage were shown in the industries of agriculture and service.

That the increase in the average wage of skilled workers was higher than that of unskilled workers widened the wage difference between these two groups during 2010-2012.

Table 4.6: Working hours and wage of skilled workers

	<i>Average weekly working hours</i>		<i>Hourly wage (thousand VND)</i>		<i>Monthly wage (thousand VND)</i>	
	2010	2012	2010	2012	2010	2012
Agriculture	40,6	34,5	9,5	14,1	1549,2	1946,7
Manufacturing	48,0	47,1	8,6	14,5	1659,5	2733,1
Electricity, water supply and mining	44,1	43,5	10,7	16,0	1888,7	2773,4
Construction	47,6	46,3	9,8	14,8	1872,0	2749,6
Wholesale and retail trade;	49,2	48,4	11,6	13,4	2288,2	2589,8
Transportation	47,6	47,4	12,6	15,3	2401,6	2909,1
Accommodation and food service activities	47,8	47,3	8,8	12,9	1685,8	2443,4
Financial, banking, insurance and real estate activities	43,5	43,4	9,8	19,9	1702,4	3446,3
Information, Science and Technology,						
Education and Health care	43,3	40,9	10,3	15,7	1784,6	2574,3
Services	46,1	46,2	4,7	10,4	870,9	1928,9
Other activities	43,0	40,8	10,9	16,0	1865,3	2602,4
Total	44,6	42,6	10,3	15,6	1843,4	2651,3

Note: skilled workers are defined as workers with elementary, advanced vocational training, and higher education.

Source: Labor Force and Employment Survey

Table 4.7: Working hours and wage of unskilled workers

	<i>Average weekly working hours</i>		<i>Hourly wage (thousand VND)</i>		<i>Monthly wage (thousand VND)</i>	
	2010	2012	2010	2012	2010	2012
Agriculture	42,2	37,7	10,2	8,7	1718,0	1317,3
Manufacturing	49,1	47,6	7,8	8,7	1523,4	1659,2
Electricity, water supply and mining	46,6	45,0	8,3	10,6	1541,0	1903,1
Construction	49,2	47,7	9,0	9,8	1774,9	1864,1
Wholesale and retail trade;	48,9	48,3	8,3	9,0	1617,1	1740,7
Transportation	48,8	48,2	8,8	11,5	1708,5	2214,7
Accommodation and food service activities	48,1	47,2	6,3	7,4	1204,9	1399,4
Financial, banking, insurance and real estate activities	47,4	44,8	9,7	11,1	1833,5	1980,6
Information, Science and Technology, Education and Health care	46,1	44,1	7,2	8,9	1318,1	1573,1
Services	47,3	46,2	8,6	7,2	1622,6	1325,9
Other activities	46,0	42,4	6,9	8,5	1273,8	1444,7
Total	45,3	42,1	8,4	9,0	1521,5	1518,8

Note: skilled workers are defined as workers with elementary, advanced vocational training, and higher education.

Source: Labor Force and Employment Survey

4.3. Short-term labor shift

As mentioned above, in the long run most workers can find jobs after they lose their previous jobs. The unemployment rate in Vietnam is relatively low and tends to decrease even during economic slowdown. A question is brought forward as to whether workers lose or switch their jobs in the short run. Table 4.8 and Table 4.9 show the labor shift in terms of the share of workers in the short run (the first 6 months compared to the last 6 months of 2012) by industries. To estimate these tables, we use the panel data from the Labor Force and Employment Survey which was repeated on a quarterly or 6 month basis. For instance, the first line of Table 4.8 presents the rate of workers in agriculture during the first 6 months of 2012 (which was surveyed in either Quarter 1 or Quarter 2). During the last 6 months (which was surveyed in either Quarter 3 or Quarter 4), 88.8 percent workers stayed in agriculture while 2.03 percent switched to manufacturing and 3.95 percent did not go to work by the year-end.

Table 4.8 showed that the percentage of workers who did not switch to other industries was 80 percent on average. Agriculture was the industry whereby the switching trend was not apparent (88.8 percent workers still stayed in agriculture). Workers in industries with low rates of workers having signed labor contracts and low average wages tend to switch to other industries in a hope that they can find better job opportunities. However, these workers do not have high chances of finding jobs in such industries as Finance, Banking-Insurance-Real Estate or Information, Science and Technology, Education and Health care. 6.2 percent workers in service industry switched to agriculture, 5.6 percent switched to retailing and 5.5 percent became unemployed. Only 7.2 percent workers could find new jobs in 2012, mostly in agriculture (3.5 percent). The rate of workers in construction industry who switched to other industries was also high whereby 12 percent of construction workers in the first 6 months of 2012 switched to agriculture during the last 6 months.

Service industry also witnessed an obvious trend of labor shift whereby only 66.2 percent workers in the first 6 months stayed in this industry in the last 6 months. The job loss rate was 4 percent. The highest job loss rate was recorded for the industry of service (5.5 percent) while the lowest was in Information, Science and Technology, Education and Health care (2.8 percent).

The rate of workers switching to agriculture was quite high, which reflects that in a context when other industries face difficulties, workers tend to return to agriculture. The highest rates of workers switching to agriculture were recorded for retailing and manufacturing.

Table 4.9 analyzes the labor shift in 2011. Switching trend in 2011 tended to be consistent with that in 2012. However, the rates of workers switching to other industries in 2011 were generally lower than those in 2012. The situation implies that employment tends to be less stable during economic slowdown.

Table 4.8: Rate of switching workers in 2012 by industries

		The last 6 months of 2012											
The first 6 months of 2012	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate	Information, Science and Technology.	Services	Other activities	Not working	Total
	Agriculture	88,75	2,03	0,04	1,74	1,83	0,29	0,44	0,02	0,29	0,21	0,42	3,95	100
Manufacturing	6,47	80,66	0,23	1,67	3,03	0,78	0,93	0,08	0,61	0,65	0,64	4,25	100
Electricity, water supply and mining	4,97	3,22	73,98	2,78	4,39	0,88	0,73	0,15	0,73	1,17	4,24	2,78	100
Construction	12,00	3,29	0,11	74,76	2,15	1,07	0,77	0,02	0,99	0,59	0,97	3,27	100
Wholesale and retail trade;	5,67	3,42	0,16	0,81	79,21	1,28	2,65	0,09	0,50	0,82	1,00	4,40	100
Transportation	4,73	3,24	0,23	2,02	5,29	76,12	1,22	0,17	0,73	0,63	2,12	3,51	100
Accommodation and food service activities	3,41	2,02	0,05	0,80	6,76	0,69	78,01	0,18	0,64	0,92	1,35	5,18	100
Financial, banking, insurance and real estate	0,43	1,28	0,14	0,43	1,71	0,71	1,56	83,64	1,71	0,28	5,12	2,99	100
Information, Science and Technology, Education and	2,84	1,16	0,07	0,67	1,27	0,23	0,55	0,15	87,09	0,46	2,74	2,79	100
Services	6,17	4,73	0,37	1,76	5,64	1,22	2,07	0,37	2,98	66,17	2,98	5,53	100
Other activities	3,27	1,57	0,32	0,64	1,97	1,03	1,05	0,57	2,97	1,14	82,23	3,24	100
Not working	3,51	0,94	0,03	0,28	0,86	0,18	0,44	0,05	0,31	0,19	0,36	92,84	100
Total	29,97	7,92	0,41	3,61	8,19	1,94	2,94	0,46	3,99	1,19	4,05	35,33	100

Source: Labor Force and Employment Survey

Table 4.9: Rate of switching workers in 2012 by industries

		The last 6 months of 2012											
The first 6 months of 2012													
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Services	Other activities	Not working	Total	
Agriculture	85,28	2,26	0,06	2,00	2,06	0,34	0,44	0,02	0,25	0,24	0,47	6,58	100
Manufacturing	6,54	76,71	0,16	1,70	3,70	0,82	0,94	0,07	0,63	0,81	0,78	7,13	100
Electricity, water supply and mining	4,86	2,19	73,98	3,15	3,81	0,67	0,48	0,19	1,43	0,19	4,58	4,48	100
Construction	10,98	3,83	0,38	72,86	2,30	1,43	0,74	0,07	0,68	0,70	0,94	5,10	100
Wholesale and retail trade;	5,94	3,74	0,26	0,96	75,74	1,21	2,71	0,13	0,59	1,14	0,99	6,61	100
Transportation	5,12	3,15	0,14	2,27	5,88	73,74	1,29	0,25	0,59	0,74	1,82	5,02	100
Accommodation and food service activities	3,29	2,50	0,09	0,95	7,38	0,78	73,35	0,21	0,44	0,89	1,52	8,60	100
Financial, banking, insurance and real estate	1,58	1,58	0,25	0,50	1,75	0,83	0,42	79,20	1,41	0,67	5,74	6,07	100
Information, Science and Technology, Education and	2,57	1,00	0,10	0,69	1,47	0,32	0,60	0,16	84,68	0,70	2,70	5,02	100
Services	4,35	5,75	0,38	2,00	7,24	1,78	1,87	0,22	1,75	62,25	3,11	9,28	100
Other activities	3,24	1,55	0,55	0,97	1,98	1,44	1,06	0,77	2,63	0,98	79,89	4,95	100
Not working	4,75	1,45	0,05	0,59	1,37	0,32	0,64	0,07	0,40	0,31	0,46	89,59	100
Total	24,46	7,58	0,42	3,56	7,94	1,93	2,80	0,47	3,69	1,22	3,64	42,30	100

Source: Labor Force and Employment Survey

Table 4.10: Rate of switching workers in 2012 by economic sectors

The first 6 months of 2012	The last 6 months of 2012							
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	Total
Working for individual	85,88	7,92	0,98	0,15	0,26	0,56	4,25	100
Household business	16,81	74,49	3,08	0,24	0,33	0,71	4,35	100
Private enterprise	6,70	6,98	74,13	2,79	3,32	1,75	4,33	100
Foreign invested enterprise	3,69	2,06	10,19	78,83	0,89	0,65	3,69	100
State-owned enterprises	3,75	1,89	9,10	0,93	73,51	6,88	3,94	100
State sector	3,59	1,45	1,25	0,14	2,03	88,67	2,87	100
Not working	4,62	1,45	0,58	0,15	0,21	0,56	92,42	100
Total	37,06	12,35	4,84	1,39	2,10	6,79	35,45	100

Source: Labor Force and Employment Survey

Table 4.10 reflects the rates of labor shift in short run (the first 6 months compared to the last 6 months of 2012) to other economic sectors. On average, the rate of workers who did not switch to other sectors was around 80 percent. The sector with most stable structure was state and working for individual with respective rates of workers who stay in the sectors of 88.7 percent and 85.8 percent. Meanwhile, the highest rates of workers switching to other sectors were in state-owned enterprises, private enterprises and household businesses. There were a considerable percentage of 9.1 percent of workers in state-owned enterprises switching to private enterprises. Among switching workers of household businesses, the majority changed to self-employed making up 16.8 percent the total workers of the sector.

Table 4.11 displays the labor shift in the short run (the first 6 months compared with the last 6 months) by economic sectors in 2011. The switching trend in 2011 was quite consistent with that in 2012. However, the rate of switching workers in 2011 was in general lower than that in 2012.

Table 4.11: Rate of switching workers in 2011 by economic sectors

The first 6 months of 2012	The last 6 months of 2012							
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	Total
Working for individual	82,90	8,02	1,09	0,17	0,25	0,53	7,04	100
Household business	13,35	75,49	3,25	0,39	0,32	0,62	6,57	100
Private enterprise	6,59	9,76	67,09	2,85	3,48	2,05	8,18	100
Foreign invested enterprise	2,97	2,61	10,53	74,13	1,34	0,79	7,63	100
State-owned enterprises	3,01	2,24	9,66	0,94	70,86	7,69	5,60	100
State sector	3,41	1,67	1,41	0,20	3,25	85,08	4,99	100
Not working	5,81	2,66	0,96	0,37	0,27	0,70	89,22	100
Total	28,80	14,35	4,63	1,51	2,020	6,18	42,51	100

Source: Labor Force and Employment Survey

5. Poverty and welfare of households

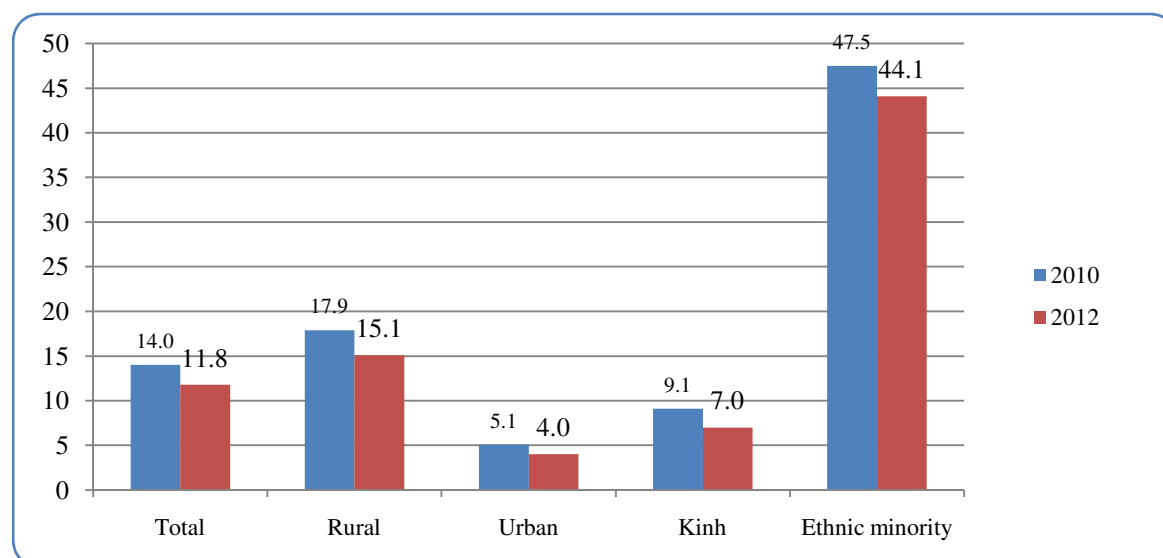
5.1. Poverty reduction in recent years

Table 5.1 presents the estimates of average income and poverty rate based on the income poverty line. The income poverty line for the period of 2011-2015 is 400,000 VND/person/month (equivalence to 4.8 million VND/person/year) for the rural areas and 500,000 VND/person/month (6 million VND/person/year) for the urban areas. Based on this poverty line and according to the General Survey on Poor and Near-poor Households by Molise, the poverty rate was 14.2 percent by 2010 (MOLISA, 2011). If this poverty line was applied to VHLSS 2010, the poverty rate was estimated to be 7.9 percent, much lower than the poverty rate announced by MOLISA. The reason of this difference is that VHLSS 2010 collected comprehensive data on the household income, while the General Survey on Poor and Near-poor Households employed a much simpler questionnaire, which could result in the omission of a number of sources of household income. The General Survey on Poor and Near-poor Households collected information of a large number of poor and near-poor households, which made it impossible to use the comprehensive questionnaire of the sampling survey.

In this research, we use norms on households in danger of falling into poverty instead of poverty line. The norms on households in danger of falling into poverty for the period of 2011-2015 are 520,000 VND/person/month for the rural areas and 650,000 VND/person/month for the urban areas. When these norms on households in danger of falling into poverty for the period of 2011-2015 was applied to VHLSS 2010, the proportion of households having income below these norms was 14 percent, closer to the poverty rate announced by MOLISA. Therefore, poor households in this research are defined as households with each member earning an average income of up to VND 520,000 per month in rural areas and up to 650,000 VND per month in urban areas. To calculate the poverty line for VHLSS 2012, we adjusted this norm on households in danger of falling into poverty for inflation in the 2010-2012 period.

Results from the annual review of poor households by MOLISA showed that the poverty rate reduced by 2 percentage points. However, there were still opinions pointing out that the actual poverty rate could increase in the context of economic slowdown (Vneconomy, 2013). Estimates from VHLSS 2010 and 2012 indicated that the poverty rate decreased from 14 percent in 2010 to 11.8 percent in 2012 (Figure 5.1). Poverty reduction was achieved in both rural and urban areas, as well as all geographical regions including such poverty regions as the Northern midlands and mountains and Central Highlands. The Central Coast achieved the most notable poverty reduction from 20.6 percent in 2010 to 15.5 percent in 2012 (Table 5.1).

Figure 5.1: Poverty rate within 2010-2012



Source: VHLSS 2010 and 2012

The real average income of households has increased by 3.5 percent over the two years. This growth rate is much slower than that of the 2006-2008 period, which was recorded at 17 percent (this estimate was based on VHLSS 2006 and 2008). On the contrary, the average income in urban areas was reduced slightly. In terms of geographical regions, the household income in the Southeast reduced by 9.2 percent. The average household income in the Red River Delta went up but the increase is quite small in comparison with other regions. In summary, the household income in high-income regions increased at a slower rate or even decreased compared to other regions. This difference reflected the effects of economic slowdown on households whose income depends on the performance of service or industrial activities.

Table 5.1: The household income and poverty rate by geographical regions

Areas	Average Income (Thousand VND/person/month)		Income rate of change (%)	Poverty rate (%)		Change in poverty rate (Percentage point)
	2010	2012		2010	2012	
The whole country	1574.6	1629.7	3.5	14.0	11.8	-2.2
Rural/Urban areas						
Rural areas	1219.3	1311.5	7.6	17.9	15.1	-2.8
Urban areas	2383.9	2372.2	-0.5	5.1	4.0	-1.1
Geographical regions						
Red River Delta	1735.1	1807.6	4.2	7.2	6.0	-1.2
Northern Midlands and Mountains	991.0	1128.7	13.9	33.1	29.0	-4.1
Central Coast	1119.4	1274.4	13.8	20.6	15.5	-5.1
Central Highlands	1267.6	1555.3	22.7	18.3	15.9	-2.4
Southeast	2715.9	2465.7	-9.2	1.9	1.8	-0.1
Mekong River Delta	1348.3	1435.4	6.5	12.1	10.6	-1.5

Average income was measured by the price level in January 2010.

Source: VHLSS 2010 and 2012

One of the weaknesses of poverty rate measurement is its inability to indicate how far off households are from the poverty line or reflect the “depth of poverty”. To measure the depth of poverty, we use two indices, including the poverty gap index and the squared poverty gap index (which are described in detail in Annex 1). The higher these indices are, the larger the gap between the poverty line and the income of poor households. The squared poverty gap index puts higher weight for poor households. Therefore, it is also called poverty severity. Table 5.2 shows the reduction of the depth of poverty in both rural and urban areas. In terms of geographical regions, with the exception of the Southeast, the depth of poverty reduced in all regions, especially in the North Mountains and Central Coast. This means that the living standards of the poor and the inequality in living standards among the poor were improved in the 2010-2012 period.

Table 5.2: Poverty gap index and squared poverty gap index by geographical regions

	Poverty gap index			Squared poverty gap index		
	2010	2012	Change	2010	2012	Change
The whole country	0.0397	0.0300	-0.0097	0.0162	0.0109	-0.0053
<i>Rural/Urban areas</i>						
Rural areas	0.0519	0.0388	-0.0131	0.0215	0.0142	-0.0073
Urban areas	0.0119	0.0096	-0.0023	0.0043	0.0034	-0.0009
<i>Geographical regions</i>						
Red River Delta	0.0175	0.0156	-0.0019	0.0063	0.0056	-0.0007
Northern Midlands and Mountains	0.1054	0.0792	-0.0262	0.0460	0.0297	-0.0163
Central Coast	0.0586	0.0382	-0.0204	0.0246	0.0140	-0.0106
Central Highlands	0.0527	0.0408	-0.0119	0.0208	0.0138	-0.0070
Southeast	0.0046	0.0049	0.0003	0.0020	0.0017	-0.0003
Mekong River Delta	0.0308	0.0246	-0.0062	0.0113	0.0087	-0.0026

Source: VHLSS 2010 and 2012

Although poverty is often measured by general living standard measures such as income and expenditure, the multi-dimension of poverty is also needed to be considered in poverty analyses. Table 5.3 analyzed the expenditure of households in two important areas of education and health. The real expenditure in education of households, which was adjusted for inflation, witnessed a slight increase over the two years of 2010 and 2012. The proportion of education expenditure in the total expenditure of households also increased from 9.6 percent in 2010 to 9.9 percent in 2012. However, the poor households suffered a reduction of about 23 percent in average education expenditure per person from 247 thousand VND to 190 thousand VND. Regarding geographical regions, the Southeast had the highest average education expenditure but this expenditure also decreased in the 2010-2012 period.

Household expenditure in health saw a minor decrease of about 2.5 percent in the period of 2010-2012. The proportion of health expenditure in the total household expenditure also went down from 11.4 percent to 10.8 percent in the same period. The poor households had a relatively large reduction in health expenditure, which decreased by 22 percent. Concerning geographical regions, the Southeast was also the region with the greatest decrease in average health expenditure in the period of 2010-2012.

Table 5.3: Average household expenditure in education and health

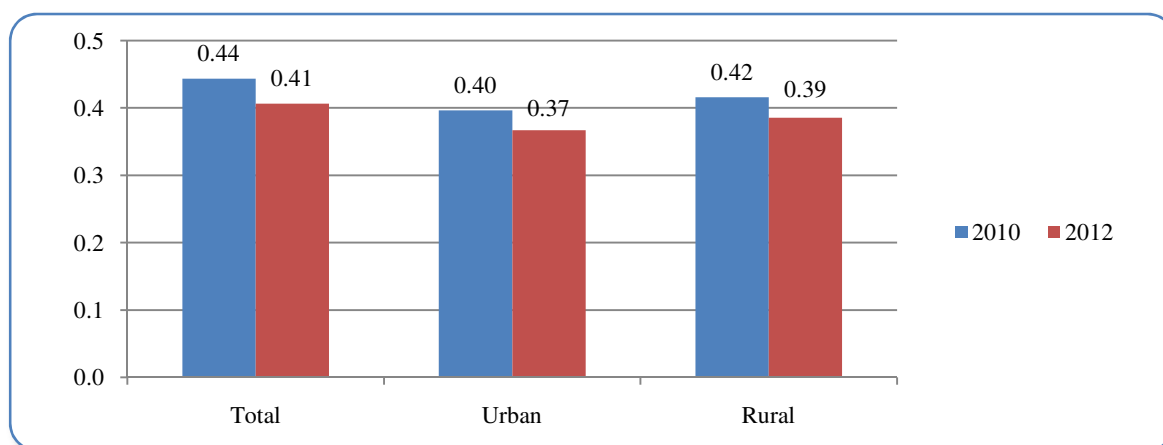
	Household expenditure in education				Household expenditure in health			
	2010		2012		2010		2012	
	Average expenditure per person (thousand VND/month)	Percent age in the total expenditure	Average expenditure per person (thousand VND/month)	Percentage in the total expenditure	Average expenditure per person (thousand VND/month)	Percent age in the total expenditure	Average expenditure per person (thousand VND/month)	Percentage in the total expenditure
<i>The whole country</i>	747.8	9.6	760.5	9.9	804.0	11.4	780.9	10.8
Poverty								
Non-poor	829.3	9.7	836.4	10.2	874.7	11.3	846.6	10.9
Poor	247.3	8.8	190.9	7.8	369.8	12.2	288.3	10.3
<i>Ethnics</i>								
Kinh	826.7	10.1	838.7	10.4	880.5	11.8	853.0	11.3
Minorities	206.0	5.9	230.4	6.4	278.8	8.5	291.9	7.2
<i>Rural/Urban areas</i>								
Rural areas	494.4	8.9	534.7	9.1	715.6	12.0	689.1	11.2
Urban areas	1325.0	11.2	1287.5	11.7	1005.5	10.0	995.3	9.8
<i>Geographical regions</i>								
Red River Delta	864.2	10.7	897.5	11.0	962.8	11.6	942.6	11.4
Northern Midlands and Mountains	419.8	7.9	428.1	7.7	522.2	8.8	619.8	8.9
Central Coast	674.4	11.4	719.5	11.8	694.6	11.6	674.1	10.5
Central Highlands	668.1	10.4	700.9	9.7	734.4	12.2	759.0	10.3
Southeast	1336.9	10.4	1178.1	11.1	964.1	10.7	789.8	9.3
Mekong River Delta	395.2	6.2	505.4	6.9	786.5	13.0	807.9	13.2

Source: VHLSS 2010 and 2012

5.2. Poverty reduction, growth and inequality

The above results show that household income in rural areas grew at a faster rate than that in urban areas in the 2010-2012 period. This finding suggests that the degree of income inequality could reduce in this period. Figure 5.2 shows that Gini ratio of income declined from 0.44 to 0.41 in the period of 2010-2012. This result is different from that of the growing period before 2010, when Gini ratio of both income and expenditure witnessed an increase (World Bank, 2012). The reason behind this reduction could be the effect of economic slowdown, making households in rural areas, rich and better-off groups suffer a greater decrease in the growth rate of income.

Figure 5.2: Gini ratio in 2010-2012



Source: VHLSS 2010 and 2012

The question is whether the rate of poverty reduction was affected by the decrease of the economic growth rate in recent years. Another question is whether a more equal income distribution contributed to the poverty reduction. To answer these questions, we need to figure out how income increase and changes in income distribution affected poverty reduction in the recent period. Table 5.4 analyzes the changes in situation of poverty in the 2010-2012 period under the effects of three factors: the growth of average income, income distribution and other factors in the decomposition of poverty changes by Datt and Ravallion (1991). The results show that household poverty reduction in the 2010-2012 period was attributed to both income increase and income inequality decrease. The poverty reduction effect of income distribution was even higher than that of income growth. Increase in income and decrease in income inequality reduced the poverty rate by 0.94 percentage point and 1.34 percentage point respectively. In urban areas, the average income increased the poverty rate. However, income redistribution helped reduce the poverty rate in urban areas by 1.22 percentage point.

Table 5.4: Growth, income distribution and poverty reduction in the 2010-2012 period

	Poverty rate			Contribution of growth and income distribution to poverty reduction in the 2010-2012 period		
	2010	2012	Change	Growth	Income distribution	Other factors
The whole country	13.99	11.76	-2.24	-0.94	-1.34	0.04
In which						
Urban	5.13	3.97	-1.16	0.05	-1.22	0.02
Rural	17.88	15.09	-2.79	-2.44	-0.69	0.34

Source: VHLSS 2010 and 2012

Table 5.5 estimates the elasticity of poverty rate to average income and inequality (which was measured by Gini index). Table 5.5 shows that the elasticity of poverty rate to Gini index was much higher than the elasticity of poverty rate to average income. In 2012, if average income grew by 1 percent, the poverty rate decreased by 2.1 percent. It is found that if Gini index increases by 1 percent, poverty rate goes up by 5.5 percent. This finding points out the more important role of income distribution in poverty reduction in comparison with average income growth. In other words, to reduce poverty, it is necessary to issue more

policies helping the poor increase their income. The elasticity of poverty rate to average income and Gini index tends to increase with time, confirming the increasingly vital role of income growth and equal income distribution guarantee in poverty reduction.

Table 5.5. The elasticity of poverty rate to income and Gini index

	The elasticity of poverty rate to average income			The elasticity of poverty rate to Gini index of average income		
	2010	2012	Change	2010	2012	Change
The whole country	-1.88	-2.09	-0.21	4.96	5.46	0.50
In which						
Urban	-2.96	-2.53	0.43	7.33	6.86	-0.47
Rural	-1.74	-2.04	-0.30	3.19	4.12	0.93

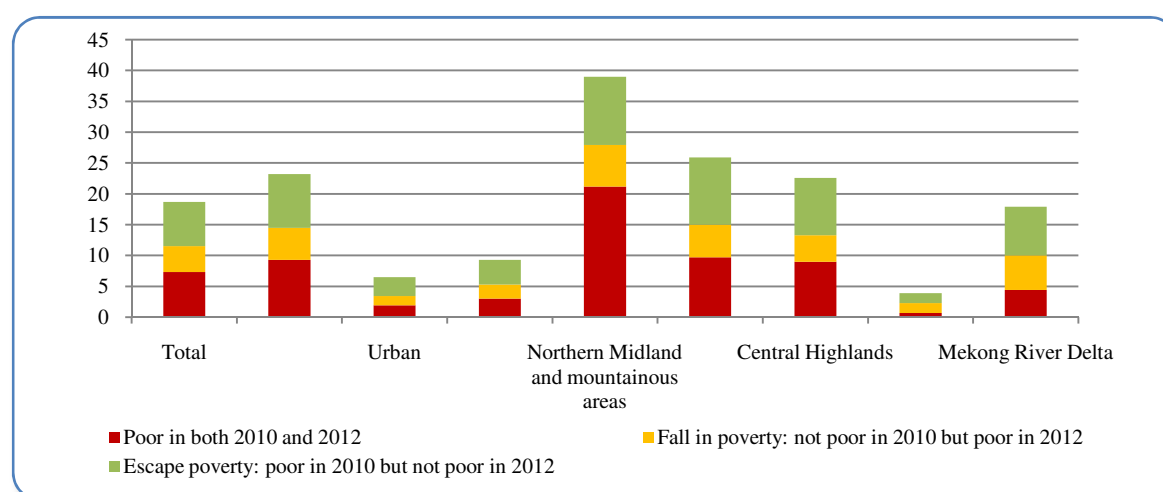
Source: VHLSS 2010 and 2012

5.3. Moving out of poverty and falling into poverty

Poor households include both chronically poor households and temporarily poor households. Identifying different poor household groups plays a crucial role in introducing suitable pro-poor policies (Baulch and Hoddinott, 2000). Chronically poor households are defined as households who are continuously poor over a long period while temporarily poor households are households who are poor at a period of time but are not poor at another period of time over a specific time span (Hulme and Shepherd, 2003). In this research, we used the panel data of VHLSS 2010 and 2012 to analyze the move of poverty in different household groups. Figure 5.3 presents the rate of moving out of poverty and falling into poverty in the 2010-2012 period. A large number of households moved out of poverty in 2012, but there were also many households who were not poor in 2010 and fell into poverty in 2012.

Figure 5.3 also shows the degree of chronic poverty by geographical regions. Chronically poor households could be considered as poor households in both 2010 and 2012. The percentage of chronically poor households witnessed a significant change in geographical regions, recording the highest score in the Northern Mountains, followed by the Central Highlands and Central Coast.

Figure 5.3. Proportion of people fall into poverty and lifted out of poverty in 2010-2012



Source: VHLSS 2010 and 2012

Table 5.6 presents in detail the rate of moving out of poverty and falling into poverty in the period of 2010-2012. The rate of falling into poverty in 2012 was 4.2 percent, accounting for 30 percent of poor households. The proportion of households falling into poverty in the total number of poor households was higher in the urban areas, the Southeast, Mekong Delta River and River Delta River, where the poverty rate was lower than other areas and suffered much more from the effect of economic slowdown. These areas are the most developed regions but have been affected the most by the economic slowdown. The last two columns of table 5.6 estimate the proportion of households moving out of poverty and falling into poverty to the total number of poor households. The region succeeded in poverty reduction if the rate of moving out of poverty was high and the rate of falling into poverty was low. However, the regions which had high rate of moving out of poverty also had high rate of falling into poverty.

Table 5.6: The rate of moving out of and falling into poverty for the 2010-2012 period by geographical areas (%)

Areas	Household distribution based on the 2010 and 2012 poverty line (%)				The proportion of households falling into poverty in 2012 to the total number of poor households in 2010 (%)	The proportion of households moving out of poverty in 2012 to the total number of poor households in 2010 (%)
	Poor in both 2010 and 2012	Falling into poverty: non-poor in 2010 but poor in 2012	Moving out of poverty: poor in 2010 but non-poor in 2012	Non-poor in both 2010 and 2012		
The whole country	7.3	4.2	7.2	81.3	36.5	49.7
Rural/Urban areas						
Rural areas	9.3	5.2	8.7	76.8	35.9	48.3
Urban areas	1.9	1.5	3.1	93.5	44.1	62.0
Geographical regions						
Red River Delta	3.0	2.3	4.0	90.7	43.4	57.1
Northern Midlands and Mountains	21.2	6.7	11.1	61.0	24.0	34.4
Central Coast	9.7	5.3	10.9	74.0	35.3	52.9
Central Highlands	9.0	4.3	9.3	77.4	32.3	50.8
Southeast	0.7	1.6	1.6	96.1	69.6	69.6
Mekong River Delta	4.4	5.6	7.9	82.1	56.0	64.2

Source: VHLSS 2010 and 2012

Table 5.7 shows that Kinh households had a higher rate of falling into poverty than ethnic minority households. Households which had high level of education also had a higher rate of falling into poverty than those which had lower level of education. This relationship is evident when the jobs of householders were examined. Householders who worked in agriculture were less likely to fall into poverty than householders working in other sectors. This finding reflects the fact that economic slowdown affected industry and service more than agriculture; and better-off households more than poor households.

Table 5.7: The rate of moving out of poverty and falling into poverty for the 2010-2012 period by household characteristics (%)

<i>Household groups</i>	Household distribution based on the 2010 and 2012 poverty line (%)				Household distribution based on the 2010 and 2012 poverty line (%)	Household distribution based on the 2010 and 2012 poverty line (%)
	Poor in both 2010 and 2012	Poor in both 2010 and 2012	Poor in both 2010 and 2012	Poor in both 2010 and 2012		
Ethnic groups						
Kinh	3.2	3.2	5.8	87.8	50.0	64.4
Ethnic minorities	33.2	10.9	16.1	39.8	24.7	32.7
Level of education of householder						
Not finish primary school	16.6	6.7	11.8	64.9	28.8	41.5
Primary school	7.6	4.9	7.8	79.7	39.2	50.6
Lower secondary school	4.3	3.9	7.2	84.6	47.6	62.6
Upper secondary school	3.1	2.6	5.0	89.3	45.6	61.7
Vocational school	0.8	1.7	1.7	95.8	68.0	68.0
College, university and post-graduate	0.0	0.0	0.5	99.5	n.a.	100.0
Householder employment						
Not working	3.8	2.1	5.1	89.0	35.6	57.3
Official area	2.7	1.8	2.9	92.6	40.0	51.8
Unofficial area	9.0	5.2	8.5	77.2	36.6	48.6
Jobs of householders						
Manager	3.5	5.5	4.0	87.1	61.1	53.3
Specialist, technician	0.4	1.6	2.2	95.8	80.0	84.6
Secretary, office worker	2.1	1.2	3.1	93.6	36.4	59.6
Agriculture	13.4	6.5	11.2	68.9	32.7	45.5
Skilled Laborer	2.7	2.3	4.4	90.6	46.0	62.0
Unskilled Laborer	3.7	4.9	4.4	87.0	57.0	54.3
Not working	4.2	2.7	6.3	86.8	39.1	60.0

Source: VHLSS 2010 and 2012

Table 5.8 and 5.9 analyzes the ratio of households having a decrease in real income in the period of 2010-2012. Vietnam had about 38.8 percent of household having a decrease in real income, and the rate of decrease in average income of this household groups was quite high, scoring at about 32.5 percent. On the contrary, there were about 61.2 percent of households having an increase in real income at the rate of 54.1 percent in the 2010-2012 period.

In terms of geographical regions, the Southeast had the largest number of households having a decrease in real income at a high rate. The Central Highlands had a relatively low rate of households having a decrease in income and simultaneously the highest rate of income increase of developed household group.

Table 5.8: Changes in income of households by region (%)

Areas	Households having a decrease in real income				Households having an increase in real income			
	% of households having a decrease in income	Average income/person/month in 2010	Average income/person/month in 2012 (by 2010 price)	% change in income	% of households having an increase in income	Average income/person/month in 2010	Average income/person/month in 2012 (by 2010 price)	% change in income
The whole country	38.8	1879.5	1268.4	-32.5	61.2	1136.7	1751.1	54.1
Rural/Urban areas								
Rural areas	37.5	1507.6	984.8	-34.7	62.5	956.6	1539.4	60.9
Urban areas	42.3	2776.0	1952.0	-29.7	57.7	1667.9	2375.3	42.4
Geographical regions								
Red River Delta	39.3	2233.2	1521.0	-31.9	60.7	1364.1	2021.0	48.2
Northern Midlands and Mountains	38.3	1188.3	821.6	-30.9	61.7	805.7	1268.2	57.4
Central Coast	36.1	1464.4	1040.0	-29.0	63.9	895.1	1366.4	52.7
Central Highlands	34.3	1629.0	1112.2	-31.7	65.7	1046.8	1830.9	74.9
Southeast	40.2	2862.1	1793.4	-37.3	59.8	1604.6	2501.8	55.9
Mekong River Delta	42.2	1659.6	1137.1	-31.5	57.8	1055.8	1632.4	54.6

Source: VHLSS 2010 and 2012

Table 5.9 also shows that the rate of households having a decrease in average income in households where the householders had a high level of education or worked in non-agricultural sectors was higher than that in households where householders had a lower level of education or worked in agricultural sector. This demonstrates the fact that the effects of economic slowdown hit industries requiring highly-skilled labor (or sustainable jobs, non-agricultural jobs) more seriously.

Table 5.9: Changes in household income by household characteristics (%)

Household groups	Households having a decrease in real income				Households having an increase in real income			
	% of households having a decrease in income	Average income/person/month in 2010	% of households having a decrease in income	Average income/person/month in 2010	% of households having a decrease in income	Average income/person/month in 2010	% of households having a decrease in income	Average income/person/month in 2010
Ethnic groups								
Kinh	38,5	2057,7	1382,8	-32,8	61,5	1230,4	1891,6	53,7
Ethnic minorities	40,8	815,2	584,9	-28,3	59,2	520,1	826,8	59,0
Level of education of householder								
Not finish primary school	39,5	1199,5	826,5	-31,1	60,5	751,5	1191,7	58,6
Primary school	38,3	1497,1	1043,2	-30,3	61,7	980,6	1601,1	63,3
Lower secondary school	37,4	1831,6	1208,4	-34,0	62,6	1074,3	1716,5	59,8
Upper secondary school	38,2	2028,0	1421,2	-29,9	61,8	1294,3	1949,9	50,7
Vocational school	40,5	2785,8	1761,3	-36,8	59,5	1601,9	2357,6	47,2
College, university and post-graduate	42,4	4005,6	2754,4	-31,2	57,6	2473,8	3309,8	33,8
Householder employment								
Not working	40,2	2152,1	1484,4	-31,0	59,8	1301,6	1937,4	48,8
Official area	39,0	2834,4	2036,5	-28,2	61,0	1637,8	2387,8	45,8
Unofficial area	38,3	1648,1	1083,3	-34,3	61,7	1014,3	1602,5	58,0
Jobs of householders								
Manager	36,9	2904,7	1736,0	-40,2	63,1	1588,7	2399,0	51,0
Specialist, technician	42,3	3211,1	2358,7	-26,5	57,7	1597,4	2366,6	48,2
Secretary, office	39,5	2243,4	1613,3	-28,1	60,5	1476,8	2246,3	52,1

worker									
Agriculture	38,6	1446,3	912,6	-36,9	61,4	843,0	1381,6	63,9	
Skilled Laborer	36,2	1832,8	1276,9	-30,3	63,8	1292,8	1891,6	46,3	
Unskilled Laborer	38,0	1670,8	1144,3	-31,5	62,0	1106,8	1743,4	57,5	
Not working	40,8	2229,0	1493,1	-33,0	59,2	1316,6	1951,0	48,2	

Source: VHLSS 2010 and 2012

5.4. Livelihoods of poor households

The main livelihoods of poor households depend largely on agricultural activities, of which cultivation plays the most important part, followed by aquaculture and livestock. Table 5.10 shows that the proportion of average income by different livelihood activities of poor households as well as non-poor households did not witness many changes over the two years of 2010 and 2012. In 2012, the proportion of income from cultivation of poor households to the total income was 31.9 percent. That from wages and salaries was about 24.4 percent. Next, remittances accounted for 10.4 percent, followed by income from aquaculture, livestock and others. Income from non-agricultural production and business occupied the smallest proportion of only 5.1 percent of the total income of poor households.

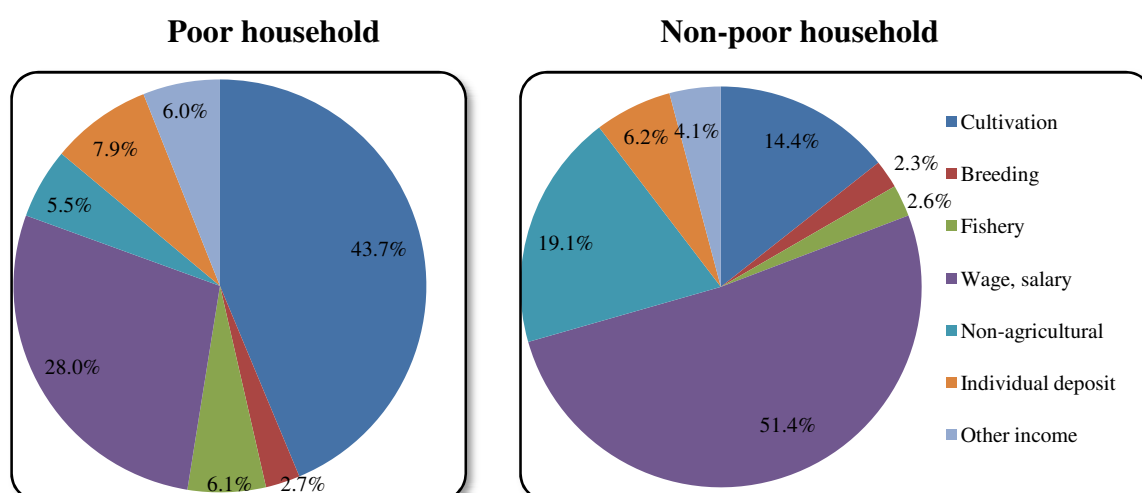
Table 5.10: Household livelihoods by the structure of income

Percentage of income from activities	2010			2012		
	Non-poor	Poor	Total	Non-poor	Poor	Total
Cultivation	15.3	33.8	17.9	15.2	31.9	17.2
Livestock	4.2	8.1	4.8	4.3	8.1	4.7
Aquaculture	3.5	9.6	4.3	3.2	9.6	4.0
Income from wages and salaries	42.3	24.9	39.9	43.9	24.4	41.6
Non-agricultural activities	19.3	5.8	17.4	17.8	5.1	16.3
Remittances	8.8	10.0	8.9	8.8	10.4	9.0
Others	6.5	7.7	6.7	6.9	10.4	7.3

Source: VHLSS 2010 and 2012

Figure 5.4 estimates the distribution of poor households by major livelihoods in 2012. The difference between this figure and table 5.9 is that it estimates the distribution of households by major livelihoods and does not estimate the structure of average income. Major livelihoods of households are defined as the livelihoods which bring about the source of income with the highest proportion in the total income. Livestock was the major livelihood of 43.7 percent of poor households while wages and salaries were the major livelihoods of 28 percent of poor households. Only 5.5 percent of poor households relied on non-agricultural activities. The proportion of non-poor households having major livelihoods of wages, salaries and non-agricultural activities were 51.4 percent and 19.1 percent accordingly.

Figure 5.4. Household proportion by livelihood 2012



Source: VHLSS 2012

Figure 5.4 shows that there were 7.9 percent of poor households and 6.2 percent of non-poor households relied on remittances as the major livelihoods. In the context of low economic growth, one of the concerns of poor households is that the sources of remittances of relatives and friends will be affected. Table 5.10 shows that the proportion of remittances to the total income was unchanged. However, to analyze in detail, we estimated the proportion of households receiving remittances and the amount of remittances in comparison price of 2010 in table 5.11 and 5.12.

Table 5.11: Households receiving remittances from foreign countries in the 2010-2012 period

Areas	The proportion of households receiving remittances from foreign countries			The average amount of remittances/per person/year of households receiving remittances		
	2010	2012	Change (%)	2010	2012	Change (%)
The whole country	4.40	4.64	0.24	10534.6	7982.7	-24.2
Rural/Urban areas						
Rural areas	3.37	3.67	0.30	9143.5	8781.0	-4.0
Urban areas	6.74	6.90	0.16	12118.1	6991.1	-42.3
Geographical regions						
Red River Delta	3.15	3.34	0.19	14414.8	9540.4	-33.8
Northern Midlands and Mountains	2.60	1.93	-0.67	12781.1	16321.3	27.7
Central Coast	5.18	5.34	0.16	6448.2	6996.3	8.5
Central Highlands	1.80	1.90	0.10	1109.0	2307.9	108.1
Southeast	6.48	7.09	0.61	13125.3	6320.4	-51.8
Mekong River Delta	5.24	5.93	0.69	9446.0	8337.0	-11.7

The average amount of remittances is measured by the price index in January 2010.

Source: VHLSS 2010 and 2012

Results indicated that the proportion of households receiving remittances increased slightly in the 2010-2012 period, however, the average amount of remittances per person in

comparison price decreased by 24.2 percent. The decline of the amount of remittances in urban areas was much higher than that in rural areas. Regarding geographical regions, the Southeast and Red River Delta had the highest rate of decline. On the other hand, Central Highlands and the Northern Mountains had the lowest proportion of households receiving remittances but the average amount of remittances received increased during this period.

The domestic remittances also had the same tendency as the foreign remittances. The proportion of households receiving remittances witnessed a small increase. However, the amount of remittances received went down at smaller rate than that of foreign remittances. The annual average amount of remittances per person in urban areas decreased by 8.8 percent while that in rural areas saw a growth of 3.6 percent.

Table 5.12: Households receiving domestic remittances in the period of 2010-2012

Areas	The proportion of households receiving domestic remittances			The average amount of remittances/per person/year of households receiving remittances		
	2010	2012	Change (%)	2010	2012	Change (%)
The whole country	82.9	84.8	1.9	1527.2	1510.3	-1.1
Rural/Urban areas						
Rural areas	84.7	85.3	0.6	1300.4	1347.0	3.6
Urban areas	78.9	83.6	4.7	2081.4	1899.1	-8.8
Geographical regions						
Red River Delta	87.4	90.4	3.0	1621.9	1812.9	11.8
Northern Midlands and Mountains	78.4	82.5	4.0	907.6	991.4	9.2
Central Coast	79.6	82.0	2.5	1237.1	1186.5	-4.1
Central Highlands	92.6	94.1	1.6	535.7	718.4	34.1
Southeast	75.0	83.3	8.2	2713.3	2176.9	-19.8
Mekong River Delta	88.0	81.0	-7.0	1472.2	1477.0	0.3

The average amount of remittances is measured by the price index in January 2010.

Source: VHLSS 2010 and 2012

Although the income structure of households have not changed much, there were a number of households making changes to their major livelihoods in the 2010-2012 period. The question raised is how households changed their major livelihoods and whether this move brought about higher income. To answer this question, we used panel data of VHLSS 2010 and 2012, of which there were 4.157 households surveyed in both 2010 and 2012 to assess the change in major livelihoods of households.

Table 5.13 estimates the percentage of households changing their major livelihoods from 2010 to 2012. For example, the first line shows the major livelihood in 2012 of households who had livestock as their major livelihood in 2010. Specifically, 66.3 percent of households had cultivation as their major livelihood in both 2010 and 2012. On the other hand, there were 17.3 percent of households switching their major livelihood from cultivation to paid-workers and 3 percent moved to other livelihoods.

The diagonal in table 5.13 (in bold type) reflects the percentage of households not changing the major livelihoods in 2010 and 2012. The higher the value of diagonal

estimates, the lower the changes in major livelihoods. The proportion of households changing their major livelihoods was lowest in those living largely on wages and salaries, followed by those self-working in non-agricultural activities. These were also the two livelihoods with the highest income. Households having livestock as the major livelihood changed their livelihoods the most. There were about 70 percent of them moving to other livelihoods. They tended to switch to salaries and wages to earn a livelihood.

Table 5.13: Changes in major livelihoods in the 2010-2012 period

		Major livelihoods in 2012							Total
		Cultivation	Livestock	Aquaculture	Wages and salaries	Non-agricultural activities	Remittances	Others	
Major Livelihoods In 2010	Cultivation	66.3	3.2	3.6	17.3	3.3	3.7	2.5	100
	Livestock	27.1	30.4	5.4	15.3	9.8	6.6	5.5	100
	Aquaculture	15.5	1.5	51.3	19.9	1.9	5.2	4.7	100
	Wages and salaries	4.7	1.3	0.5	81.4	7.6	3.0	1.5	100
	Agricultural activities	3.1	1.0	0.7	21.4	67.1	4.2	2.7	100
	Remittances	11.6	0.7	0.7	28.7	7.8	38.8	11.7	100
	Others	8.8	4.1	1.1	26.7	8.6	13.7	37.1	100
	Total	17.6	2.3	3.0	48.8	17.6	6.4	4.4	100

Source: VHLSS 2010 and 2012

In table 5.14, we assess the changes in major livelihoods of poor households (based on the poverty line of 2010). Generally, poor households changed their livelihoods more than non-poor households. However, the difference among two groups is not much. The highest proportion of households changed their livelihood to wages and salaries, followed by cultivation.

Table 5.14: Changes in major livelihoods of poor households in the 2010-2012 period

		Major livelihoods in 2012							Total
		Cultivation	Livestock	Aquaculture	Wages and salaries	Non-agricultural activities	Remittances	Others	
Major Livelihoods In 2010	Cultivation	59.6	5.0	4.8	20.8	3.9	2.8	3.1	100
	Livestock	29.6	0.0	14.9	21.0	12.3	6.6	15.7	100
	Aquaculture	18.0	0.0	37.1	30.7	0.0	9.0	5.2	100
	Wages and salaries	14.1	1.0	0.9	72.1	3.3	5.6	3.0	100
	Agricultural activities	7.9	0.0	0.0	20.3	64.0	3.7	4.1	100
	Remittances	13.4	0.0	2.6	33.0	3.2	35.7	12.2	100
	Others	11.7	3.3	3.1	9.3	0.0	36.9	35.8	100
	Total	34.6	2.7	5.3	36.9	6.2	8.5	5.9	100

Source: VHLSS 2010 and 2012

The next question is whether households received higher income after changing their livelihoods. Changing livelihoods is endogenous, which means households only move to another livelihood if they realize the clear chance of obtaining higher income. Therefore, it

is not easy to answer this question. In this research, we only used the percentage of change in income to see how household income changed after the change in major livelihoods. Table 5.14 presents household income in comparison price of 2010 by each household group before and after the change in major livelihoods. The percentage of change (%) was also estimated. It should be noted that cells highlighted in yellow represent estimates of below 20 observations (households) and the results need to be explained with caution.

The results show that almost households changing their major livelihoods experienced an increase in their real income. The highest rate of income increase occurred in households moving from cultivation to livestock and non-agricultural activities and from cultivation to remittances. Households moving from cultivation to other livelihoods had their income go up over two years. Households switching to other livelihoods from salaries and wages also achieved an income increase. However, moving from other livelihoods to livestock often reduced household income. The change from several non-agricultural livelihoods such as remittances and agricultural production and business to wages and salaries also resulted in a decline in real average income.

Table 5.15: Changes in major livelihoods of households in the 2010-2012 period

		Major livelihoods in 2012							Total	
		Cultivation	Livestock	Aquaculture	Wages and salaries	Non-agricultural activities	Remittances	Others		
Major Livelihoods In 2010	Cultivation	2010	1075.6	670.7	590.9	751.7	833.9	792.9	752.5	962.3
		2012	1287.9	1082.3	851.5	972.0	1328.7	1271.4	1154.9	1208.1
		Change	19.7	61.4	44.1	29.3	59.3	60.3	53.5	25.5
	Livestock	2010	1351.4	1707.5	1108.2	1270.0	1565.9	871.8	533.3	1378.9
		2012	1135.9	2321.3	861.4	1281.3	1168.5	1344.7	1193.0	1523.8
		Change	-15.9	35.9	-22.3	0.9	-25.4	54.2	123.7	10.5
	Aquaculture	2010	863.0	1751.3	1264.0	767.5	3539.6	940.7	1784.4	1161.6
		2012	710.9	1195.5	1446.6	790.3	770.3	827.8	1814.3	1170.4
		Change	-17.6	-31.7	14.4	3.0	-78.2	-12.0	1.7	0.8
	Wages and salaries	2010	793.0	1079.4	876.0	1551.4	1472.1	1063.8	2056.3	1493.5
		2012	945.8	1415.6	1128.1	1708.6	1983.3	1665.3	2864.5	1703.3
		Change	19.3	31.1	28.8	10.1	34.7	56.5	39.3	14.0
	Non-agricultural activities	2010	3226.3	1136.6	779.0	2039.7	1732.0	1237.0	1663.1	1808.9
		2012	1421.2	1676.3	1673.4	1707.2	1875.5	1775.9	2649.7	1838.6
		Change	-55.9	47.5	114.8	-16.3	8.3	43.6	59.3	1.6
	Remittances	2010	952.6	1228.8	989.9	1867.1	1368.6	1555.1	1506.0	1548.1
		2012	863.1	1523.8	1801.9	1306.4	1625.1	1631.2	1220.8	1400.7
		Change	-9.4	24.0	82.0	-30.0	18.7	4.9	-18.9	-9.5
	Others	2010	1297.8	870.4	801.5	2456.9	2204.0	657.3	1118.9	1507.9
		2012	1285.9	1330.3	3610.9	1641.5	1596.7	1031.9	1275.0	1394.9
		Change	-0.9	52.8	350.5	-33.2	-27.6	57.0	14.0	-7.5
Total	2010	1112.3	1164.2	1038.9	1557.8	1651.6	1211.2	1366.0	1440.6	
	2012	1209.3	1606.8	1307.7	1625.4	1851.0	1532.5	1674.4	1577.9	
	Change	8.7	38.0	25.9	4.3	12.1	26.5	22.6	9.5	

Note: cells highlighted in yellow are of estimates of below 20 observations. Therefore, results need to be explained with caution.

Source: VHLSS 2010 and 2012

6. Conclusions

This research provides a comprehensive picture about the current situation of firm operation, employment, households' income and poverty in the context of economic slowdown. The study uses the most updated data from large-scale surveys including VHLSS 2010 and 2012, LFS and Enterprise Census within the period of 2007-2012.

The analytical results show that the number of enterprises still increases but at a lower rate as compared to previous years. In 2011 and 2012, the number of enterprise in financial intermediary, banking, and real estate's experienced the lowest increase, which differs from the quick pace of the pre-2011 years. Construction sector experiences a low increase in number of enterprises. The newly established firms mainly are micro-enterprises (lower than 10 labors). In the economic slowdown context, there are many bankrupt enterprises, which normally are small-scale firms, and there are many other small enterprises established in this period.

Firms' real average revenue (adjusted for inflation) within 2007-2012 has declined. In 2011, the average revenue was 12.3 billion VND, decreased by 6 percent as compared to that of 2007. The average size of labor per enterprise also decreased from 47.4 workers in 2007 to 44.4 workers in 2008 and continued to decline to 32.6 workers (a decrease of over 30 percent) in 2011.

In comparison to the pre-slowdown period in 2007-2008, firms has higher tendency to change their main business in 2010-2011. In 2008, only one service sector (firms are categorized into 10 main sectors, some relatively small industry was classified into "Others", see in Table 3.1) has more than 10 percent of firms shifting their businesses to other sectors; this corresponding figure in 2011 is seven out of ten sectors. The rate of change is especially the highest in science and technology and services. Firms have high tendency to change their business to wholesale and retail, partly because wholesale and retail has easy entry and requires low fixed investment.

The majority of firms that did not change their business experience growth in revenue. Sectors such as construction, "scientific activities and technology, education and healthcare" did not experience increase in revenue growth; however, the rate of decrease was relatively small at -3.6 percent and -0.4 percent respectively. Meanwhile, firms changed their business to Wholesale and retail trade and manufacturing sectors achieves high growth in revenue.

Even though average size of enterprise decreased, the increase in number of firms has resulted in an increase in total number of employment. Unemployment rate slightly decreased during 2008-2012. In 2012, unemployment rates in rural and urban areas are 3.1 percent and 1.3 percent respectively. However, the average working hours per week in all sectors dropped. This number in many sectors was substantially lower than the average 48 hours/week. Average working hours in agriculture was 37.6 hours, indicating a 21 percent decrease from 2007.

Average real salary still increased, but the quality of work has fallen down. In particular, the percentage of labor having labor contract declined from 43.4 percent in 2011

to 41.1 percent in 2012. This number decreased in most sectors. The proportion of workers that have remuneration benefits such as social insurance and health insurance experienced a slight drop. The wage gap between skilled and unskilled labor tends to increase within 2010-2012.

Workers are more likely to shift their jobs to other sectors in the context of economic slowdown. Service sector experienced the highest labor shift, reflected in only 66.2 percent of labor working in the first six months still remained in service sector in the last six months of 2012. The proportion of workers that remains working in agriculture is the highest at 88.8 percent. Agriculture was found to attract labor from other industries. This fact indicates that when employment situation in other sectors become difficult, workers are more likely to turn to less sustainable, lower-productivity activities in agriculture. For instance, a large proportion of labor in construction sector shift their jobs to other sectors and up to 12 percent of labor working in construction sector at the beginning of the year moved to agriculture at the end of 2012.

Average real household income increased insignificantly at 3.5 percent during 2010-2012, which is much lower than the rate of 17 percent increase during the period 2006-2008. Household income in urban areas slightly decreased. With regard to geographic region, households in the Southwest region have their income dropped by 9.2 percent on average over the last two years.

Increase in average real income has contributed to the decrease in poverty rate from 14 percent in 2010 to 11.8 percent in 2012. Progress in poverty reduction takes place in both rural and urban areas as well as in all regions such as Central Highland and Northern midland and mountain areas. However, households' expenditure for health care and education decreased within 2010-2012, reflecting a decline in the poor's living standard during the economic slowdown.

Achievements in poverty reduction contribute to a decrease in Gini ratio from 0.44 to 0.41 within 2010-2012. The analytical results show that poverty reduction in the period of 2010-2012 is mainly attributed to increase in household income and decrease in inequality. The impact of income distribution is even higher than the impact of income increase.

The global economic crisis has depressed enterprises' revenue, profit and size even though the extent of impact has not been serious. This fact implies that Vietnam economy has not achieved its growth expectation. If the economic slowdown prolongs, negative impacts on enterprises, employment and households' welfare will intensify over time. Poverty reduction is unsustainable without economic growth. Besides, it is noted that the impact of the economic slowdown might be long-term and have certain lag. Meanwhile, this research only focuses on the current situation of enterprises and households.

In order to acquire sustainable poverty reduction, the Government should formulate policies to boost the economic growth and support the vulnerable groups. The vulnerable groups include labor without insurance, underemployed labor in rural areas, poor households and households in danger of falling into poverty.

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Annex 1: Poverty and Inequality measurement

Dataset of the VHLSS were used to analyze the poverty, inequality and livelihood of rural households. The poverty index is measured by the FGT as followed (Foster, Greer and Thorbecke, 1984):

$$P_{\alpha} = \frac{1}{n} \sum_{i=1}^q \left[\frac{z - Y_i}{z} \right]^{\alpha} \quad , \quad (1)$$

While Y_i is the average expenditure per capita of person i^{th} , z is the poverty line, n is the number of people in the sample, q is the number of poor people, and can be interpreted as the measurement of poverty severity.

When being 0, the formula gives us H index which measures the poverty rate – the rate of people living below the poverty line. When being 1 or 2 we can have the poverty gap (PG) enabling the measurement of poverty depth, and the squared poverty gap indicating the poverty severity.

To measure the inequality, Gini ratio is used which is calculated as below (Deaton, 1997):

$$G = \frac{n+1}{n-1} - \frac{2}{n(n-1)\bar{Y}} \sum_{i=1}^n \rho_i Y_i \quad (2)$$

While ρ_i is the place of person i^{th} in the expenditure distribution Y with the order on which the wealthiest person is 1. \bar{Y} is the average expenditure per capita of the whole sample; n is the number of observations. Gini value ranges from 0 (absolute equal) to 1 (absolute unequal). The closer the Gini is, the bigger the inequality in expenditure becomes.

Annex 2: Labor tables

Table A.4.1: Labor shift by industries including every type of workers in 2011 (by the number of workers)

Year-start	Year-end												Total
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	
Agriculture	53343	1415	40	1252	1290	213	275	11	156	151	291	4114	62551
Manufacturing	1252	14683	30	326	709	157	180	13	121	156	150	1365	19142
Electricity, water supply and mining	51	23	776	33	40	7	5	2	15	2	48	47	1049
Construction	958	334	33	6359	201	125	65	6	59	61	82	445	8728
Wholesale and retail trade;	1207	760	52	195	15394	245	551	26	119	232	202	1343	20326
Transportation	250	154	7	111	287	3602	63	12	29	36	89	245	4885
Accommodation and food service activities	232	176	6	67	520	55	5168	15	31	63	107	606	7046
Financial, banking, insurance and real estate activities	19	19	3	6	21	10	5	952	17	8	69	73	1202
Information, Science and Technology, Education and Health care	250	97	10	67	143	31	58	16	8245	68	263	489	9737
Services	137	181	12	63	228	56	59	7	55	1959	98	292	3147
Other activities	305	146	52	91	186	135	100	72	247	92	7512	465	9403
Not working	5305	1624	54	654	1528	362	720	81	446	342	511	100022	111649
Total	63309	19612	1075	9224	20547	4998	7249	1213	9540	3170	9422	109506	258865

Source: Labor Force and Employment Survey

Table P.4.2: Labor shift by economic industries (only examining workers with more than 40 hours/week) in 2011 (by number of workers)

Year-start	Year-end												
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	Total
Agriculture	29082	678	29	632	638	114	150	7	70	77	158	1609	33244
Manufacturing	913	12958	29	270	581	135	133	11	109	130	126	1112	16507
Electricity, water supply and mining	41	23	705	30	27	7	5	2	14	1	43	45	943
Construction	821	298	33	5634	178	111	49	6	54	52	76	377	7689
Wholesale and retail trade;	902	635	45	154	13044	216	443	23	108	193	180	1020	16963
Transportation	184	134	5	95	234	3136	51	12	25	29	80	200	4185
Accommodation and food service activities	162	133	5	50	399	42	4042	12	22	43	69	419	5398
Financial, banking, insurance and real estate activities	13	16	2	6	19	9	4	885	17	7	66	68	1112
Information, Science and Technology, Education and Health care	209	78	11	58	115	30	52	15	7070	56	239	410	8343
Services	108	140	11	35	175	40	37	5	47	1557	80	220	2455
Other activities	200	123	47	78	159	122	80	68	229	71	6637	377	8191
Total	32635	15216	922	7042	15569	3962	5046	1046	7765	2216	7754	5857	105030

Source: Labor Force and Employment Survey

Table A.4.3: Rates of switching workers by economic industries, (only examining workers with more than 40 hours/week) in 2011 (by number of workers)

Year-start	Year-end												
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	Total
Agriculture	87.48	2.04	0.09	1.90	1.92	0.34	0.45	0.02	0.21	0.23	0.48	4.84	100
Manufacturing	5.53	78.50	0.18	1.64	3.52	0.82	0.81	0.07	0.66	0.79	0.76	6.74	100
Electricity, water supply and mining	4.35	2.44	74.76	3.18	2.86	0.74	0.53	0.21	1.48	0.11	4.56	4.77	100
Construction	10.68	3.88	0.43	73.27	2.31	1.44	0.64	0.08	0.70	0.68	0.99	4.90	100
Wholesale and retail trade;	5.32	3.74	0.27	0.91	76.90	1.27	2.61	0.14	0.64	1.14	1.06	6.01	100
Transportation	4.40	3.20	0.12	2.27	5.59	74.93	1.22	0.29	0.60	0.69	1.91	4.78	100
Accommodation and food service activities	3.00	2.46	0.09	0.93	7.39	0.78	74.88	0.22	0.41	0.80	1.28	7.76	100
Financial, banking, insurance and real estate activities	1.17	1.44	0.18	0.54	1.71	0.81	0.36	79.59	1.53	0.63	5.94	6.12	100
Information, Science and Technology, Education and Health care	2.51	0.93	0.13	0.70	1.38	0.36	0.62	0.18	84.74	0.67	2.86	4.91	100
Services	4.40	5.70	0.45	1.43	7.13	1.63	1.51	0.20	1.91	63.42	3.26	8.96	100
Other activities	2.44	1.50	0.57	0.95	1.94	1.49	0.98	0.83	2.80	0.87	81.03	4.60	100
Total	31.07	14.49	0.88	6.70	14.82	3.77	4.8	1.00	7.39	2.11	7.38	5.58	100

Source: Labor Force and Employment Survey

Table A.4.4: Labor shift by economic sectors, all types of workers in 2011 (by number of workers)

Year-start	Year-end							Total
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	
Working for individual	61744	5970	813	130	184	396	5241	74478
Household business	4696	26564	1144	138	114	219	2313	35188
Private enterprise	769	1138	7825	332	406	239	954	11663
Foreign invested enterprise	113	99	400	2817	51	30	290	3800
State-owned enterprises	154	115	495	48	3630	394	287	5123
State sector	559	273	231	32	532	13940	818	16385
Not working	6522	2985	1083	415	302	789	100132	112228
Total	74557	37144	11991	3912	5219	16007	110035	258865

Source: Labor Force and Employment Survey

Table A.4.5: Labor shift by economic sectors, only examining workers with more than 40 working hours per week in 2011

Year-start	Year-end							Total
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	
Working for individual	34769	3786	489	73	135	207	2314	41773
Household business	3710	22233	988	113	102	184	1730	29061
Private enterprise	675	1034	7368	324	395	215	869	10880
Foreign invested enterprise	98	97	383	2735	51	29	277	3670
State-owned enterprises	133	111	475	41	3382	368	279	4789
State sector	414	221	200	31	512	12298	718	14394
Total	39799	27482	9903	3317	4577	13301	6187	104567

Source: Labor Force and Employment Survey

Table A.4.6: Rate of switching workers by economic sectors, only examining workers with more than 40 working hours per week in 2011

Year-start	Year-end							Total
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	
Working for individual	83.23	9.06	1.17	0.17	0.32	0.50	5.54	100
Household business	12.77	76.50	3.40	0.39	0.35	0.63	5.95	100
Private enterprise	6.20	9.50	67.72	2.98	3.63	1.98	7.99	100
Foreign invested enterprise	2.67	2.64	10.44	74.52	1.39	0.79	7.55	100
State-owned enterprises	2.78	2.32	9.92	0.86	70.62	7.68	5.83	100
State sector	2.88	1.54	1.39	0.22	3.56	85.44	4.99	100
Total	38.06	26.28	9.47	3.17	4.38	12.72	5.92	100

Source: Labor Force and Employment Survey

Table A.4.7: Labor shift by industries including every type of workers in 2011 (by the number of workers)

Year-start	Year-end												Total
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	
Agriculture	41320	946	17	812	854	135	204	10	133	96	194	1839	46560
Manufacturing	776	9672	27	200	363	93	112	10	73	78	77	510	11991
Electricity, water supply and mining	34	22	506	19	30	6	5	1	5	8	29	19	684
Construction	653	179	6	4067	117	58	42	1	54	32	53	178	5440
Wholesale and retail trade;	717	433	20	103	10024	162	335	11	63	104	126	557	12655
Transportation	143	98	7	61	160	2302	37	5	22	19	64	106	3024
Accommodation and food service activities	149	88	2	35	295	30	3406	8	28	40	59	226	4366
Financial, banking, insurance and real estate activities	3	9	1	3	12	5	11	588	12	2	36	21	703
Information, Science and Technology, Education and Health care	174	71	4	41	78	14	34	9	5342	28	168	171	6134
Services	116	89	7	33	106	23	39	7	56	1244	56	104	1880
Other activities	206	99	20	40	124	65	66	36	187	72	5179	204	6298
Not working	1913	509	19	150	467	98	240	27	171	104	198	50538	54434
Total	46204	12215	636	5564	12630	2991	4531	713	6146	1827	6239	54473	154169

Source: Labor Force and Employment Survey

Table A.4.8: Labor shift by economic industries (only examining workers with more than 40 hours/week) in 2011 (by number of workers)

Year-start	Year-end												
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	Total
Agriculture	16441	366	11	304	330	54	74	4	59	39	90	587	18359
Manufacturing	423	7062	23	146	258	72	70	10	67	52	63	350	8596
Electricity, water supply and mining	24	19	451	17	19	5	3	1	4	5	27	14	589
Construction	405	113	5	2798	95	45	25	1	49	23	43	117	3719
Wholesale and retail trade;	357	293	13	68	6853	113	205	7	49	65	92	365	8480
Transportation	88	73	6	51	112	1803	28	5	15	11	56	78	2326
Accommodation and food service activities	78	44	1	23	169	18	2057	6	14	20	42	107	2579
Financial, banking, insurance and real estate activities	3	9	0	3	8	4	8	554	12	1	35	17	654
Information, Science and Technology, Education and Health care	154	61	2	40	72	12	30	8	4914	20	148	149	5610
Services	65	58	7	20	64	16	24	5	41	807	42	54	1203
Other activities	117	78	17	31	94	58	49	36	174	50	4581	165	5450
Total	18155	8176	536	3501	8074	2200	2573	637	5398	1093	5219	2003	57565

Source: Labor Force and Employment Survey

Table A.4.9: Rate of switching workers to other industries by economic industries, only examining workers with more than 40 working hours per week in 2011

Year-start	Year-end												
	Agriculture	Manufacturing	Electricity, water supply and mining	Construction	Wholesale and retail trade;	Transportation	Accommodation and food service activities	Financial, banking, insurance and real estate activities	Information, Science and Technology, Education and Health care	Services	Other activities	Not working	Total
Agriculture	89.55	1.99	0.06	1.66	1.80	0.29	0.40	0.02	0.32	0.21	0.49	3.20	100
Manufacturing	4.92	82.15	0.27	1.70	3.00	0.84	0.81	0.12	0.78	0.60	0.73	4.07	100
Electricity, water supply and mining	4.07	3.23	76.57	2.89	3.23	0.85	0.51	0.17	0.68	0.85	4.58	2.38	100
Construction	10.89	3.04	0.13	75.24	2.55	1.21	0.67	0.03	1.32	0.62	1.16	3.15	100
Wholesale and retail trade;	4.21	3.46	0.15	0.80	80.81	1.33	2.42	0.08	0.58	0.77	1.08	4.30	100
Transportation	3.78	3.14	0.26	2.19	4.82	77.52	1.20	0.21	0.64	0.47	2.41	3.35	100
Accommodation and food service activities	3.02	1.71	0.04	0.89	6.55	0.70	79.76	0.23	0.54	0.78	1.63	4.15	100
Financial, banking, insurance and real estate activities	0.46	1.38	0.00	0.46	1.22	0.61	1.22	84.71	1.83	0.15	5.35	2.60	100
Information, Science and Technology, Education and Health care	2.75	1.09	0.04	0.71	1.28	0.21	0.53	0.14	87.59	0.36	2.64	2.66	100
Services	5.40	4.82	0.58	1.66	5.32	1.33	2.00	0.42	3.41	67.08	3.49	4.49	100
Other activities	2.15	1.43	0.31	0.57	1.72	1.06	0.90	0.66	3.19	0.92	84.06	3.03	100
Total	31.54	14.20	0.93	6.08	14.03	3.82	4.47	1.11	9.38	1.90	9.07	3.48	100

Source: Labor Force and Employment Survey

Table A.4.10: Labor shift by economic sectors all types of workers in 2011 (by the number of workers)

Year-start	Year-end							
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	Total
Working for individual	50649	4671	580	89	152	330	2504	58975
Household business	2892	12814	529	41	56	123	748	17203
Private enterprise	487	507	5388	203	241	127	315	7268
Foreign invested enterprise	79	44	218	1687	19	14	79	2140
State-owned enterprises	125	63	303	31	2447	229	131	3329
State sector	378	153	132	15	214	9341	302	10535
Not working	2530	793	319	83	116	307	50571	54719
Total	57140	19045	7469	2149	3245	10471	54650	154169

Source: Labor Force and Employment Survey

Table A.4.11: Rate of switching workers by economic sectors, only examining workers with more than 40 working hours per week in 2011

Year-start	Year-end							
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	Total
Working for individual	21141	2508	279	40	66	147	904	25085
Household business	1779	8903	378	32	42	89	492	11715
Private enterprise	338	386	4572	164	226	115	253	6054
Foreign invested enterprise	60	37	191	1381	17	13	63	1762
State-owned enterprises	86	59	281	29	2267	218	118	3058
State sector	293	130	117	12	197	8692	271	9712
Total	23697	12023	5818	1658	2815	9274	2101	57386

Source: Labor Force and Employment Survey

Table A.4.12: Rate of switching workers to other sectors by economic sectors, only examining workers with more than 40 working hours per week in 2011

Year-start	Year-end							Total
	Working for individual	Household business	Private enterprise	Foreign invested enterprise	State-owned enterprises	State sector	Not working	
Working for individual	84.28	10.00	1.11	0.16	0.26	0.59	3.60	100
Household business	15.19	76.00	3.23	0.27	0.36	0.76	4.20	100
Private enterprise	5.58	6.38	75.52	2.71	3.73	1.90	4.18	100
Foreign invested enterprise	3.41	2.10	10.84	78.38	0.96	0.74	3.58	100
State-owned enterprises	2.81	1.93	9.19	0.95	74.13	7.13	3.86	100
State sector	3.02	1.34	1.20	0.12	2.03	89.50	2.79	100
Total	41.29	20.95	10.14	2.89	4.91	16.16	3.66	100

Source: Labor Force and Employment Survey