



UN Development Programme Viet Nam

Technical Note

The impact of the global economic downturn on employment levels in Viet Nam: an elasticity approach

1. Introduction

The past few months have seen a constant flow of news reporting on the unfolding global financial and economic crisis and on its likely impact on Viet Nam. More recently, the Vietnamese press has started to report on the first symptoms of the crisis in Viet Nam, with stories reporting on large drops in the number of tourists entering the country, companies postponing investments, others closing down, and depicting a general slowdown in the rate of economic activity, FDI inflows and exports and imports of goods and services. In light of these events, the government has recently revised downwards its GDP growth forecasts for 2009, from 7.5 percent to 6.5 percent, and has announced a six billion USD stimulus package. This package aims at mitigating the impact of the global financial and economic crisis on the Vietnamese economy and its people, and preventing a general slowdown of economic activity in Viet Nam.

One immediate effect of the crisis in Viet Nam is likely to be on levels of employment and job creation, as firms and entrepreneurs revise downwards their production schedules to adjust to a falling global and local demand, delay investments in new production capacity or, in some cases, close down. This is clearly not an unimportant or desirable outcome. Hence, employment has a direct effect on domestic consumption, as well as on people's living standards and lives. In addition, in Viet Nam the generation of large numbers of jobs has been a key factor behind the country's success in reducing poverty incidence during the past two decades.

These events also take place in a context in which there is a large flow of people entering the Vietnamese labour market, with the Vietnamese labour force growing by over one million people every year and with the economy continuing to reallocate workers out of agriculture into non-farming sectors. This adds further pressure to the need to create jobs, especially jobs in non-farming sectors, so as to ensure the inclusiveness of economic growth in Viet Nam, as well as some degree of social (and political) stability.

It is against this background that this note aims to provide some clarity as to how and by how much the current economic slowdown might impact employment levels and job creation in Viet Nam. The purpose of this exercise is to inform current debates on the likely effects of the global financial crisis on the Vietnamese economy by providing some numbers on its potential impact on employment levels. It also aims to stimulate discussions on policy options available to the government to limit the effects of the current crisis on the Vietnamese economy and its population. In addition, this technical note also identifies a number of structural problems affecting growth-employment dynamics in Viet Nam, and which need to be addressed if the Vietnamese economy is to continue growing in an equitable and socially inclusive way.

It is important to underline that the analysis presented here is only a first step in this direction. It is also one based on some very rough estimates of economic and employment trends in Viet Nam.

In this respect, the results reported in this note are preliminary and should be seen as only tentative and aimed at encouraging public debate on these issues, rather than as an exhaustive and conclusive assessment of the impact of the global financial crisis in Viet Nam.

2. Employment elasticities of growth: what do they say for in Viet Nam

A simple way of capturing the relationship between output growth and employment generation in an economy is through the analysis of employment elasticities of growth (EEGs). These elasticities capture the association between output growth in the economy in a given period – calculated, for instance, in GDP terms – and the number of jobs created over that same period of time. EEGs can be defined using the following mathematical formulation:

$$\varepsilon = \frac{\Delta Y / Y}{\Delta L / L}$$

Or, its ‘applied’ equivalent:

$$\varepsilon = \frac{\text{Employment growth rate, \%}}{\text{GDP growth rate, \%}}$$

Holding for other potential explanatory factors, the above ratios indicate that the higher the employment elasticity of growth in a given sector the higher the rate of growth of employment in that same industry for a given increase in industry output levels.

Typically, aggregate EEGs values tend to fall within the 0.1-0.7 range (SAARC, 2005), meaning that as output grows employment generation also increases, but at a slower pace. Still, important inter-sectoral variations might exist when breaking down these indices at a sector level, with some industries typically reporting negative EEGs. This is, for instance, the case of agricultural sectors in developing economies, where agricultural growth typically takes place at the same time as workers move out from agriculture to take up jobs in non-farming sectors, reflecting these countries’

transition from being rural-based economies centred in the production of primary activities towards becoming industrial and increasingly urbanized economies.

Several estimates of employment elasticities of growth have been obtained for the Vietnamese case (e.g. Son, 2005, Jenkins, 2004; Lan Huong, 2003; Ronnas *et al*, 2001). However, most of these estimates, if not all, are based on data only going up to the early 2000s. Moreover, they are presented in a very aggregate form, by economic sector: agriculture, industry and services. In this respect, this note presents an updated analysis of EEGs in Viet Nam using data going up to 2007 and with a detailed breakdown by type of economic activity and type of company ownership.

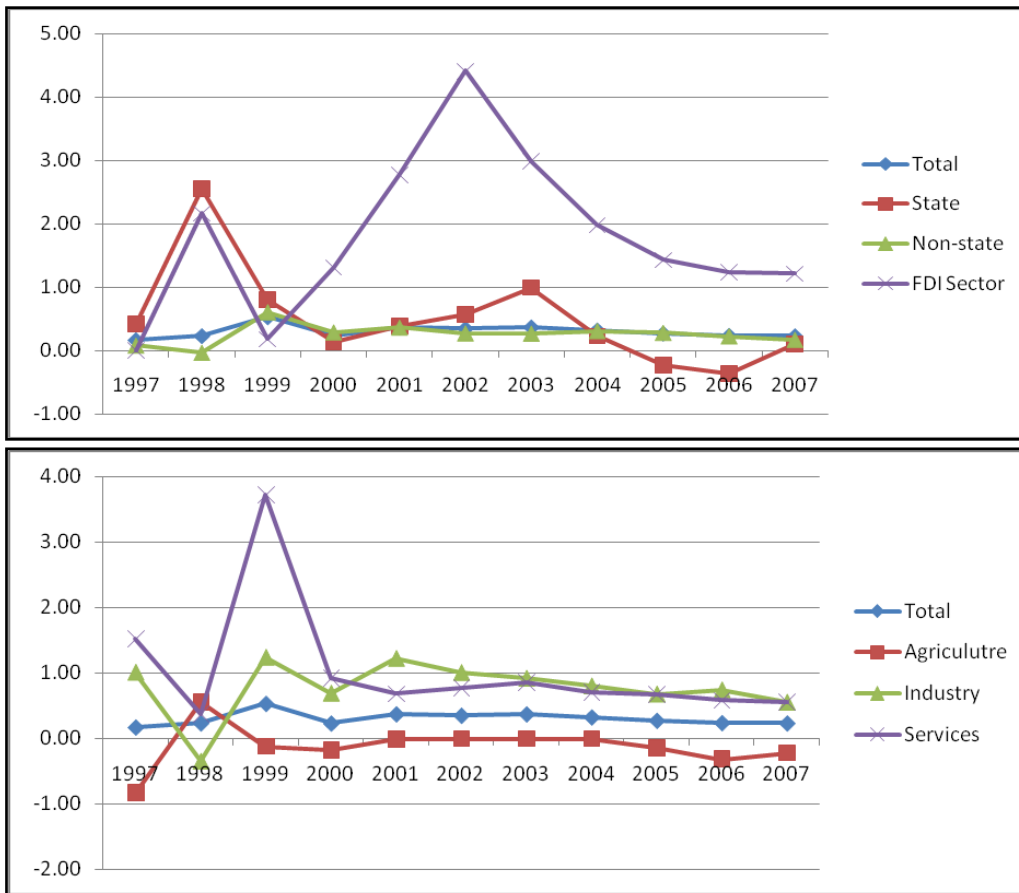
Ideally, the empirical analysis of EEGs should be based on the econometric estimation of a structural model explaining how employment is determined in the economy, and also how employment and growth dynamics relate. This approach would allow holding for other factors at play, including relative price levels, wages, interest rates, wealth effects, or changes in technology and skills levels, among others. However, due to data and time constraints the analysis presented here is based on a simple, *back of the envelope* calculation, using only GDP and employment data to obtain elasticity indices based on the formula presented above. In this respect, these estimates should be viewed only as an *ex post* descriptive measure of association between growth and employment dynamics in Viet Nam. Nevertheless, despite these limitations, they still provide a valuable insight into the likely impact of the current economic slowdown on employment levels in Viet Nam. Moreover, whilst only providing an imperfect measure of ‘true’ EEGs in Viet Nam, the figures presented here come very close to those obtained through more ‘rigorous’ econometric estimation methods (e.g. Lan Huong, 2003).

Table 1 below reports a summary of these EEGs estimates, broken down by economic activity and type of ownership, whilst Graph 1 presents a plot

of how these elasticities have evolved from 1997 to 2007 in more aggregate terms: by industry and

ownership type. The full dataset of EEGs can be viewed in Appendix 1, at the end of this note.

Graph 1. Viet Nam: Employment Elasticities of Growth, 1997-2007



Several things stand out from the analysis of the data presented in these tables and graphs. One first issue is the downward trend observed in most of these elasticities, with all aggregate indices reporting falling elasticities over the past decade, including EEGs by sector, ownership type and the EEG figure obtained for the Vietnamese economy as a whole. This suggests that the Vietnamese economy is increasingly reducing its ability to generate new jobs, a factor, which as mentioned earlier, has been instrumental in Vietnam's success in reducing poverty incidence during the past two decades. This is very much in line with what previous research (e.g. FETP, 2008a) has already identified; that is, that growth in Viet Nam has increasingly been driven by a process of capital-intensive investment in activities associated with low levels of employment generation. Hence, the state-owned sector, which has been growing at a

annual average rate of 7.5 percent was actually shedding workers in 2005 and 2006. This could be seen as an indication of industrial restructuring taking place in state-owned enterprises, but the evidence suggests that this is not the case and that more than enterprise restructuring it is investment diversification which has been taking place (Cheshier and Penrose, 2007). This downward trend has also affected the non-State sector, although this has probably been driven by trends in agriculture, where these dynamics can be seen as part of the process of agricultural transition and economic development taking place in Viet Nam. In this general context, FDI emerges as the main driver of job generation over the past decade, with employment levels growing by an annual average rate of 21.7 percent between 2000 and 2007. A second issue that stands out from the analysis of the figures reported in Table 1 is the relatively low

values that employment elasticities of growth have taken in Viet Nam. Hence, the aggregate EEG figure has not only been declining but, as of 2007, stands at a very low ratio of 0.227. This compares unfavorably with other developing countries and emerging economies in the region and elsewhere. For instance, average EGGs between 2000 and 2004 were as high as 0.82 in Bangladesh, 0.76 in Nepal and 0.71 in Pakistan (SAARC, 2005). Similarly, Korea, Singapore and Taiwan during the 1970s and 1980s, and Indonesia in the early 1990s were able to sustain elasticity ratios in manufacturing between 0.70 and 0.80 (Osmani, 2004, Khan, 2007), values considerably higher than those currently achieved in Viet Nam.

In short, these figures suggest that Viet Nam's employment-based poverty reduction success

has not been so much the result of its ability to set-up and develop high employment-generating industries. It is rather its capacity to trigger very high levels of output growth in industries whose performance, from an employment generation perspective, has been mediocre (although on aggregate it has generated many jobs) which explains this success. This is worrying, since Viet Nam may not be able to sustain growth rates above 8 percent, such as those recorded in the past decade indefinitely. Consequently, it might have to start considering moving towards sectors and industries with high levels of employment generation if it wants to avoid a scenario of jobless growth, especially if current inter-sectoral shifts in employment and population growth trends prevail.

Table 1. Employment Elasticities of Growth in Vietnam, 1999-2007

	GDP Structure		Average Elasticity values		
	1999	2007	1999-2001	2002-2004	2005-2007
Total	100.0%	100.0%	0.374	0.345	0.242
By Ownership					
State	40.4%	39.0%	0.446	0.600	-0.161
Non-state	49.2%	47.7%	0.418	0.281	0.223
Foreign investment sector	10.4%	13.3%	1.420	3.126	1.291
By Economic Activity					
Agriculture and forestry	21.4%	15.2%	-0.225	-0.137	-0.449
Fishing	2.3%	2.6%	0.827	1.459	0.548
Mining and quarrying	6.7%	4.9%	1.517	1.904	4.544
Manufacturing	18.0%	24.5%	0.837	0.663	0.572
Electricity, gas and water supply	2.2%	3.1%	1.952	0.823	1.062
Construction	7.5%	9.3%	1.891	1.420	0.499
Wholesale and retail trade;	16.4%	16.3%	0.606	0.754	0.416
Hotels, restaurant	3.3%	3.7%	0.317	0.411	0.189
Transport, storage & communications	4.0%	4.0%	0.071	0.098	0.042
Financial intermediation	2.1%	2.1%	2.159	1.780	2.146
Scientific activities and technology	0.5%	0.6%	1.127	0.964	0.342
Real estate renting and services	4.7%	3.4%	4.450	4.835	5.666
Public administration and defence	3.0%	2.6%	1.015	2.177	1.872
Education and training	3.4%	3.4%	0.742	0.580	0.550
Health and social work	1.4%	1.4%	2.466	1.331	0.471
Recreational, culture and sports	0.6%	0.5%	-2.219	0.297	0.239
Activities of the Party	0.1%	0.1%	4.757	2.836	2.061
Community, social & personal services	2.4%	2.1%	1.320	0.992	1.828

Source: Own calculations based on GSO data.

Finally, a third issue worth noting is the large variation that these elasticities present across different sectors and activities. In many cases these inter-sectoral differences seem to be consistent with *a priori* assumptions of how these growth-employment dynamics operate in developing and emerging economies.

Hence, elasticity values for agriculture have tended to be negative, which is a typical sign of the agricultural transition that most countries undergo as part of the process of development. Hence during the early stages of economic development, agricultural growth is typically associated with big productivity gains driven by the introduction of institutional reforms and production techniques that enable these economies to maintain or even increase levels of agricultural production, whilst at the same time reallocating (sub-employed) rural workers from (subsistence-based /small scale) agriculture into non-farming activities in rural and urban areas.

Unsurprisingly, manufacturing activities and the construction sector have been two main generators of employment in Viet Nam during the past two decades, in line with the historical experience of other developing countries, where these labour-intensive activities (at least in developing countries) tend to be the main recipients of workers moving out of agriculture.

Finally, the relatively high EEGs values reported in the health and education sectors probably reflect the attention that these two areas have received from the Government and the international donor community in Viet Nam during the last two decades. This attention has led to substantial increases in public investment into these two areas, in an attempt to improve service delivery in these sectors and raise health and educational standards in Viet Nam, and probably to the recruitment of large numbers of health and education workers.

However, other elasticities presented in Table 1 are harder to interpret or justify. Among the

former, the very high EEGs found for extractive industries (4.544) and utility sectors (Electricity, gas and water supply: 1.062). In both cases this could owe to the fact that both these areas of the economy are strongly dominated by state-owned monopolies, which may have employment generation as one of their main business goals. Among the second group are activities in *non-productive* areas, such as activities of the party (2.061), public administration and defense (1.872), which report very high employment elasticities of growth, although their contribution to GDP is relatively small. Finally, it is worth highlighting the very high EEGs posted by financial intermediation (2.146) and, especially, real estate (5.666) services, both sectors heavily associated to the boom-and-bust dynamics that Viet Nam has experienced in the last two years, since 2006.

Altogether, the figures reported in Table 1 suggest that, whilst some employment-growth dynamics taking place in Viet Nam over the past decade are consistent with stylized facts observed in other developing and emerging economies, others are more worrying. These include (i) the fact that Viet Nam's ability to generate employment has been falling over time; (ii) that, in comparison to other countries, its employment generating record has not been particularly impressive, suggesting that Viet Nam's success has been primarily based in its ability to grow fast, rather than in its capacity to develop industries that generate large numbers of jobs; and (iii) that employment generation has been led, to a significant extent, by *non-productive* sectors, very volatile activities or heavily regulated areas dominated by SOEs, none of which offer good long-term growth and, therefore, employment prospects, either because they are low-growth sectors (as with most utilities) or because they are based on extraction of exhaustible natural resources, such as oil.

3. Growth and employment prospects in Viet Nam for 2009 and beyond

These employment-growth dynamics have taken place in a context in which around 800.000 to one

million people enter the Vietnamese labor force every year, and approximately an additional 200,000 leave the agricultural sector in search of jobs in industry, construction, the services sector or in government activities.

With current employment elasticities of growth at around 0.242 during the 2005-2007 period and the Vietnamese labour force growing at an average 2.10 percent during this same time, other things equal, the Vietnamese economy currently needs to grow at an 8.67 percent rate in order to absorb all the people entering the labour market every year in Viet Nam and, this way, maintain current levels of employment in the economy. These growth requirements compare

unfavorably with those recorded in previous periods, when Viet Nam was able to maintain employment levels in the economy with much lower rates of growth. For instance, in the immediately preceding 2002-2004 period the Vietnamese economy needed to grow at a considerably lower pace of 6.78 percent, in order to provide jobs to all the workers entering the labour force and, prior to that, in the 1999-2001 period, at an even lower rate of 5.09 percent. These findings are in line with those reported in Section 2, and underscore the fact that the Vietnamese economy is increasingly unable to generate enough jobs for its workers and, hence, needs to grow increasingly faster to maintain current levels of employment in Viet Nam.

Table 2. Vietnam, Basic growth, population and employment indicators

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
GDP growth (%)	8.15	5.76	4.77	6.79	6.89	7.08	7.34	7.79	8.44	8.17	8.48
Population growth (%)	1.55	1.39	1.29	0.16	1.34	1.32	1.46	1.39	1.30	1.20	1.22
Labour Force (Million)	36.97	37.86	38.75	39.16	40.05	40.95	41.87	42.93	43.86	44.81	45.69a
Labour Force Growth (%)	n.a.	2.41	2.35	1.07	2.28	2.24	2.24	2.54	2.15	2.16	1.98
EEGs	0.16	0.23	0.53	0.22	0.37	0.35	0.37	0.32	0.27	0.23	0.23

Source: GSO; a) based on EIU projections

These ‘*back of the envelope*’ calculations have to be treated with caution, since these employment elasticities of growth are also very ‘volatile’ and can easily change from one year to the next, as the same figures presented in Table 1 suggest. Also, because they are based on a rough, simple computation of these elasticity parameters, rather than on the estimation of a structural model linking growth and employment dynamics in the economy, which could provide a more robust understanding of this relationship. Finally, it is important to note that these are average estimates for the whole of the economy, based on very disparate sectoral elasticity values, as the figures reported in Table 1 indicate. In this sense, it would be perfectly possible for Viet Nam to maintain current rates of employment with lower GDP growth rates with a different composition of growth; for instance, with growth driven by a

sudden spout in construction or manufacturing activities above that currently being recorded.

Still, despite these shortcomings, these estimates provide valuable insights of how growth and employment dynamics in Viet Nam might unfold both in the short and long term.

In particular, with these figures in hand it is easy to see how the slowdown that the Vietnamese economy is currently experiencing could have a considerable impact on employment levels and job generation in Viet Nam. Hence, whilst current short term forecasts for Viet Nam vary widely, all predict a significant slowdown in economic activity for 2009 and beyond. At one end, the December 2008 forecasts by the Economist Intelligence Unit (EIU) put real GDP growth in 2009 at 3.2 percent, which would constitute the lowest growth rate posted by Viet Nam since 1986, and 4.2 percent in

2010. The ADB and the IMF, on the other hand, predict a somewhat less pessimistic outlook, with growth forecasted to slow down to 5 percent in 2009 and then picking up to 6.2 percent in 2010, still, growth rates not seen since the late 1990s. Finally, both the World Bank and the government remain more upbeat about growth prospects for the next two years, but have still lowered down GDP forecasts for 2009 and 2010 to 6.5 percent, rates considerably lower than the 8.5 percent GDP growth rates that Viet Nam posted, for instance, in 2007.

With these figures in mind, and taking into account recent employment-growth dynamics in Viet Nam, as captured in the EEGs parameters reported in Table 1, employment generation would experience a considerable slowdown in 2009 and 2010, with between 300.000 and 700.000 jobs created annually, depending on the growth scenario taken (see Table 3). Both these values represent a considerable fall when compared to the 1 million jobs created in 2004, the 940.000 created in 2005 or, even, to the more moderate levels of job creation posted in the last two years, with around 800.000 thousand jobs created both in 2006 and

2007. With over one million people entering the job market every year, this would imply, other things equal, an additional 300.000 to 700.000 unemployed workers in 2009 and the same figure in 2010, leading to an increase in Vietnam's unemployment rate from the current level of 4.6 percent to somewhere between 6.7 and 7.6 percent in 2009, and 7.2-8.7 percent in 2010, depending on the growth scenario taken.

A closer look at the elasticity figures presented in Table 1 suggests that the overall impact could potentially be even larger. Hence, as discussed in earlier, employment growth in recent years has increasingly been concentrated in a small number of areas of the economy. Amongst these, there are sectors which are likely to be hit hardest by the current economic downturn. This includes the heavily export-oriented manufacturing sector, construction activities, real estate and financial intermediation services and, from an ownership perspective, the 'FDI' sector, all of which are heavily exposed to developments currently taking place in the international sphere as the global financial and economic crisis unfolds in industrialized, emerging and developing countries.

Table 3. Employment Simulations for 2008-2010

	Growth Forecast			EEGs (2005-07)	Workforce 2007 (mill.)	Job Creation (Mill.)		
	2008	2009	2010			2008	2009	2010
GoVN, WB	6.75%	6.50%	6.50%	0.242	44.172	0.722	0.695	0.695
IMF	6.25%	5.00%	6.00%	0.242	44.172	0.669	0.535	0.642
EIU	6.11%	3.21%	4.14%		44.172	0.634	0.265	0.382
Agriculture	3.53%	2.94%	3.08%	-0.233	23.811	-0.195	-0.163	-0.171
Industry	8.20%	2.49%	4.49%	0.658	8.825	0.476	0.145	0.261
Services	5.10%	4.09%	4.22%	0.600	11.536	0.353	0.283	0.292

These figures should be seen purely as an exploratory exercise aimed at putting some numbers on the table on the potential impact that the slowdown that the Vietnamese economy is currently experiencing might have on employment levels in Viet Nam. The final figures on the impact of the crisis on employment might vary substantially from the ones presented here. Hence,

these estimates are based on macroeconomic scenarios which might eventually prove to be wrong. Even if these GDP forecasts for 2009 and 2010 are accurate, the estimates presented in this note might still be incorrect, since they are based on a partial equilibrium analysis and, hence, an underlying scenario which assumes a static economy. However, despite these shortcomings,

they still provide a useful (albeit rough) baseline on which to start thinking about these issues.

Beyond these short term concerns regarding how the global financial crisis may impact employment levels in Viet Nam it is also important to keep the longer-term perspective in mind. In this respect, the growth-employment trends and patterns identified in Section 3 portray a somewhat bleak long-term outlook of an economy increasingly less able, other things equal, to generate large number of jobs. This is particularly worrying in a context in which population growth figures do not suggest a slowdown in the number of people entering the labor force in Viet Nam in the foreseeable future. Also in a context in which the agriculture still employs over 50 percent of the Vietnamese labour force, leaving considerable scope for large number of workers moving out of agriculture in search for jobs in the industrial and services sectors.

4. Policy options

→ *In the short term ...*

Given the global nature of the current economic downturn there is little scope for a small, open economy such as Vietnam's to try to find its own way out of this crisis by trying to stimulate local production. Hence, Industries worst affected by this slowdown, such as manufacturing, construction or tourism, are sectors which are heavily reliant on dynamics taking place in the World economy, and which determine their access to international finance (i.e. FDI or ODA) and to markets to which export their goods and services. Consequently, what happens in these sectors in the next few months will largely be dictated by developments taking place outside Viet Nam, over which the Vietnamese authorities have very little say or influence.

On the other hand, trying to boost domestic demand, so as to provide alternative markets for these industries and reduce their reliance on global dynamics, is likely to prove largely ineffective, given the small size of the Vietnamese market and low income levels still prevailing in Viet Nam. It will also probably have little effect on other sectors in the economy, given the weak

linkages and lack of diversification of the Vietnamese productive base. Thus, unless they are very well targeted, this type of policy initiatives will either be inflationary or put further pressure on an already deteriorating current account deficit.

Consequently, in the short term, efforts should be aimed at mitigating the effects of the current crisis on people's lives, as they lose their jobs and new employment opportunities are harder to find, rather than trying to stimulate its way out of this largely global crisis, which would be a futile and costly exercise. In this respect, policy initiatives should focus on those interventions with the largest and quickest impact on employment and the employability of Vietnamese workers. These include public investment initiatives in small-scale infrastructure development and rehabilitation, which can be implemented relatively easily and tend to be labour-intensive; or initiatives that link the provision of social benefits (e.g. unemployment subsidies) to the participation in training programs.

Steps should also be taken to extend existing safety nets, so as to ensure that all Vietnamese people hit by the crisis benefit from some form of social assistance. This might entail increasing funding to existing schemes, but should also involve identifying and covering new patterns of social deprivation emerging in urban areas, around industrial zones, where job losses will be higher, or in rural areas absorbing returning migrants. The recent Decree approved by the government introducing a new unemployment insurance scheme in Viet Nam is a step in the right direction. However, the fact that this decree requires workers to make payment contributions to this scheme for at least 12 months before they can claim any unemployment benefits, means that its effects will only be felt starting in 2010.

If well targeted, these initiatives might have additional multiplier effects on the rest of the economy, since beneficiaries of this type of interventions, mainly low-income unskilled workers and the poor, tend to devote most of their

income to the consumption of locally produce goods and services. They could also lead to longer-term dynamic gains, by rising productivity levels in the Vietnamese labour force and in the Vietnamese economy as a whole.

→ *In the long term ...*

Beyond these short-term considerations, the analysis presented in the previous sections also points to longer term concerns. These need be addressed with certain urgency if Viet Nam is to remain on a path of equitable and socially sustainable economic development in the long-term. These refer to observed historical trends indicating that the Vietnamese economy is increasingly unable to generate large number of jobs in an intensive way (i.e. per unit of output), having to rely ever more so on a model of accelerated growth so as to provide enough jobs to its growing population and work force.

Given the nature of these problems, long-term policy options should focus on two main areas. First, the government needs to implement reforms that will enable Viet Nam to sustain high rates of economic growth over the next decade. Many of these have already been identified (see FETP, 2008) and relate to reforms in the areas of education, infrastructure development and urbanisation, firm competitiveness and enterprise reform, state effectiveness, social equity and financial sector reform.

Second, the government should find ways of articulating policy measures that direct investment to and promote the development of labour-intensive, employment-generating sectors and activities. These sectors and activities will play a critical role absorbing the hundreds of thousands of workers which will continue entering the Vietnamese work force in coming decades, and those which will move out from agriculture looking for better paid jobs in manufacturing, construction and the services sectors.

Initiatives to send Vietnamese workers to work overseas in other countries in the region or the

Middle East might also help ease pressures on the Vietnamese labour market. However, they do not solve the underlying problem of Vietnam's growing inability to generate sufficient jobs for its growing workforce outside the agricultural sector.

*Alex Warren-Rodríguez**
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* Economic Policy Advisor. UNDP Viet Nam. Postal Address: 25-29 Phan Boi Chau, Ha Noi, Viet Nam. Tel: (84 4) 3942 1495. Email: alex.warren@undp.org

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APPENDIX 1. Viet Nam: Employment elasticities of growth, 1997-2007

	GDP Structure		Employment Elasticities of Growth										
	1997	2007	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	100.0%	100.0%	0.163	0.227	0.530	0.225	0.368	0.346	0.368	0.320	0.268	0.232	0.227
<i>(3 Year moving Average)</i>					<i>0.307</i>	<i>0.327</i>	<i>0.374</i>	<i>0.313</i>	<i>0.360</i>	<i>0.345</i>	<i>0.319</i>	<i>0.273</i>	<i>0.242</i>
By ownership		0.0%											
State	40.8%	39.0%	0.423	2.551	0.806	0.137	0.394	0.573	0.993	0.233	-0.229	-0.362	0.109
Non-state	51.9%	47.7%	0.076	-0.038	0.607	0.286	0.361	0.270	0.266	0.307	0.277	0.223	0.168
Foreign investment sector	7.3%	13.3%	--	2.166	0.176	1.310	2.775	4.411	2.987	1.981	1.431	1.233	1.209
By kind of economic activity	0.0%	0.0%											
Agriculture and forestry	22.5%	15.2%	--	--	--	--	-0.225	-0.229	-0.079	-0.104	-0.319	-0.517	-0.511
Fishing	2.6%	2.6%	--	--	--	--	0.827	3.237	0.449	0.692	0.519	0.635	0.489
Mining and quarrying	5.5%	4.9%	--	--	--	--	1.517	3.915	0.721	1.075	2.786	14.504	-3.658
Manufacturing	16.1%	24.5%	--	--	--	--	0.837	0.606	0.834	0.548	0.667	0.625	0.425
Electricity, gas and water supply	1.9%	3.1%	--	--	--	--	1.952	0.901	0.812	0.757	0.841	1.204	1.141
Construction	7.9%	9.3%	--	--	--	--	1.891	1.718	1.001	1.540	0.363	0.624	0.511
Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods	17.2%	16.3%	--	--	--	--	0.606	0.741	0.858	0.663	0.418	0.429	0.401
Hotels, restaurant	3.5%	3.7%	--	--	--	--	0.317	0.312	0.663	0.258	0.095	0.166	0.307
Transport, storage and communications	3.9%	4.0%	--	--	--	--	0.071	0.038	0.175	0.080	0.052	0.046	0.028
Financial intermediation	2.1%	2.1%	--	--	--	--	2.159	2.182	1.444	1.716	2.684	2.074	1.681
Scientific activities and technology	0.6%	0.6%	--	--	--	--	1.127	-1.031	0.810	3.113	-0.255	0.828	0.451
Real estate, renting and business activities	4.8%	3.4%	--	--	--	--	4.450	6.285	4.030	4.192	5.735	6.127	5.135
Public admin. & defence; compulsory social security	3.5%	2.6%	--	--	--	--	1.015	2.746	1.957	1.828	2.924	1.396	1.295
Education and training	3.5%	3.4%	--	--	--	--	0.742	0.628	0.673	0.438	0.510	0.640	0.499
Health and social work	1.5%	1.4%	--	--	--	--	2.466	1.355	1.154	1.485	0.561	0.461	0.390
Recreational, cultural and sporting activities	0.6%	0.5%	--	--	--	--	-2.219	0.691	0.322	-0.122	0.364	0.157	0.196
Activities of Party and of membership organisations	0.1%	0.1%	--	--	--	--	4.757	3.200	2.920	2.388	2.644	2.008	1.531
Community, social and personal service activities and private household with employed persons	2.3%	2.1%	--	--	--	--	1.320	0.935	0.849	1.193	2.820	1.390	1.273
By Sector													
Agriculture, Forestry and Aquaculture	25.1%	17.9%	-0.840	0.551	-0.128	-0.182	-0.015	-0.014	-0.014	-0.012	-0.151	-0.321	-0.225
Industry and Construction	31.3%	41.8%	1.011	-0.346	1.239	0.692	1.221	1.007	0.919	0.801	0.678	0.741	0.554
Services	43.6%	40.4%	1.522	0.364	3.720	0.920	0.677	0.769	0.851	0.697	0.671	0.579	0.552

APPENDIX 1. Viet Nam: Gross domestic product at constant 1994 prices, 1997-2007 (Billion VND)

	GDP Structure		Gross Domestic Product										
	1997	2007	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	100%	100	231,264	244,596	256,272	273,666	292,535	313,247	336,242	362,435	393,031	425,373	461,443
By ownership													
State	41.4%	39.0%	95,638	100,953	103,531	111,522	119,824	128,343	138,160	148,865	159,836	169,696	179,908
Non-state	50.4%	47.7%	116,656	121,050	126,181	132,546	140,978	150,898	160,498	171,659	185,744	201,427	220,333
Foreign investment sector	8.2%	13.3%	18,970	22,593	26,560	29,598	31,733	34,006	37,584	41,911	47,451	54,250	61,202
By kind of economic activity													
Agriculture and forestry	21.8%	15.2%	50,365	52,098	54,908	57,037	58,169	60,480	62,350	64,717	66,707	68,750	70,325
Fishing	2.4%	2.6%	5,530	5,768	5,988	6,680	7,449	7,872	8,477	9,200	10,181	10,972	12,111
Mining and quarrying	5.8%	4.9%	13,304	15,173	17,200	18,430	19,185	19,396	20,611	22,437	22,854	22,987	22,520
Manufacturing	16.8%	24.5%	38,743	42,694	46,105	51,492	57,335	63,983	71,363	79,116	89,338	100,436	113,282
Electricity, gas and water supply	2.0%	3.1%	4,572	5,136	5,531	6,337	7,173	7,992	8,944	10,015	11,247	12,604	14,108
Construction	8.2%	9.3%	18,855	18,761	19,211	20,654	23,293	25,754	28,481	31,053	34,428	38,232	42,824
Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods	17.0%	16.3%	39,422	41,170	41,994	44,644	47,779	51,245	54,747	59,027	63,950	69,418	75,437
Hotels, restaurant	3.4%	3.7%	7,949	8,307	8,517	8,863	9,458	10,125	10,646	11,511	13,472	15,145	17,071
Transport, storage and communications	4.0%	4.0%	9,178	9,536	10,141	10,729	11,441	12,252	12,925	13,975	15,318	16,870	18,628
Financial intermediation	2.0%	2.1%	4,578	4,843	5,327	5,650	6,005	6,424	6,935	7,495	8,197	8,867	9,649
Scientific activities and technology	0.6%	0.6%	1,315	1,392	1,267	1,571	1,749	1,909	2,044	2,196	2,368	2,543	2,738
Real estate, renting and business activities	4.8%	3.4%	11,071	11,682	11,926	12,231	12,631	13,106	13,796	14,396	14,816	15,252	15,872
Public admin. & defence; compulsory social security	3.4%	2.6%	7,860	8,174	7,723	8,021	8,439	8,768	9,228	9,773	10,477	11,270	12,196
Education and training	3.5%	3.4%	8,062	8,614	8,809	9,162	9,687	10,475	11,260	12,125	13,126	14,231	15,467
Health and social work	1.4%	1.4%	3,348	3,566	3,707	3,946	4,151	4,464	4,853	5,234	5,640	6,082	6,568
Recreational, cultural and sporting activities	0.6%	0.5%	1,309	1,412	1,505	1,601	1,648	1,706	1,857	1,997	2,163	2,329	2,515
Activities of Party and of membership organisations	0.1%	0.1%	249	297	300	317	334	353	372	395	423	454	491
Community social and personal service activities and private household with employed persons	2.4%	2.1%	5,554	5,973	6,114	6,301	6,609	6,942	7,353	7,773	8,325	8,930	9,641
By Sector													
Agriculture, Forestry and Aquaculture	24.2%	17.9%	55,895	57,866	60,896	63,717	65,618	68,352	70,827	73,917	76,888	79,722	82,436
Industry and Construction	32.6%	41.8%	75,474	81,764	88,047	96,913	106,986	117,125	129,399	142,621	157,867	174,259	192,734
Services	43.2%	40.4%	99,895	104,966	107,330	113,036	119,931	127,769	136,016	145,897	158,275	171,391	186,273

APPENDIX 1. Viet Nam: Employed population as of annual 1 July, 1997-2007 (Thousands of people)

	Structure		Employment										
	1997	2007	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	100.0%	100.0%	35,663	36,131	37,045	37,610	38,563	39,508	40,574	41,586	42,527	43,339	44,172
By ownership		0.0%											
State	8.3%	9.0%	2,973	3,395	3,464	3,501	3,604	3,751	4,035	4,108	4,039	3,949	3,975
Non-state	91.0%	87.5%	32,467	32,421	33,256	33,735	34,511	35,167	35,763	36,526	37,355	38,057	38,658
Foreign investment sector	0.6%	3.5%	223	315	325	374	449	590	776	953	1,133	1,333	1,540
By kind of economic activity													
Agriculture and forestry	--	50.2%	--	--	--	23,492	23,387	23,174	23,117	23,026	22,800	22,439	22,176
Fishing	--	3.7%	--	--	--	989	1,083	1,282	1,326	1,405	1,482	1,556	1,634
Mining and quarrying	--	0.9%	--	--	--	256	272	283	296	324	341	370	398
Manufacturing	--	13.5%	--	--	--	3,550	3,887	4,160	4,560	4,832	5,249	5,656	5,963
Electricity, gas and water supply	--	0.4%	--	--	--	83	104	115	126	137	151	173	197
Construction	--	5.1%	--	--	--	1,040	1,292	1,526	1,688	1,923	1,999	2,137	2,268
Wholesale & retail trade; repair of motor vehicles, motor cycles and personal and household goods	--	12.0%	--	--	--	3,897	4,063	4,281	4,532	4,767	4,933	5,114	5,292
Hotels, restaurant	--	1.8%	--	--	--	685	700	715	740	755	768	783	814
Transport, storage and communications	--	2.8%	--	--	--	1,174	1,180	1,183	1,194	1,202	1,208	1,214	1,217
Financial intermediation	--	0.5%	--	--	--	75	85	98	110	125	156	183	210
Scientific activities and technology	--	0.1%	--	--	--	19	21	19	20	25	25	26	27
Real estate, renting and business activities	--	0.5%	--	--	--	64	73	91	110	130	151	179	216
Public admin. & defence; compulsory social security	--	1.8%	--	--	--	376	396	438	483	536	648	717	793
Education and training	--	3.1%	--	--	--	995	1,037	1,090	1,145	1,184	1,234	1,300	1,357
Health and social work	--	0.9%	--	--	--	226	255	281	309	345	360	373	384
Recreational, cultural and sporting activities	--	0.3%	--	--	--	132	123	126	130	129	133	134	136
Activities of Party and of membership organisations	--	0.4%	--	--	--	64	80	95	110	126	150	172	193
Community, social and personal service activities and private household with employed persons	--	2.0%	--	--	--	493	525	549	577	616	740	814	897
By Sector													
Agriculture, Forestry and Aquaculture	68.4%	53.9%	24,383	24,856	24,689	24,481	24,470	24,456	24,443	24,431	24,282	23,995	23,811
Industry and Construction	12.1%	20.0%	4,333	4,208	4,608	4,929	5,555	6,085	6,671	7,217	7,740	8,336	8,825
Services	19.9%	26.1%	7,082	7,213	7,817	8,200	8,538	8,967	9,460	9,939	10,505	11,008	11,536