THE SECOND
VDF-TOKYO CONFERENCE
ON THE DEVELOPMENT OF VIETNAM

PROCEEDINGS

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TOKYO, JULY 15, 2006

PROGRAM

09:00-09:45	Registration
09:45-09:50	Opening Remark
09:50-10:00	Introducing VDF and VDF Tokyo Mr. Pham Truong Hoang (Yokohama University/VDF)

Morning Session <Keynote Presentations>

10:00-11:00	"Fear of Flying: Why is Sustaining Reform So Hard in Vietnam?" Prof. David Dapice (Tufts University / Harvard University)
11:00-12:00	"Vietnam's Industrial Policy Formulation: To Become a Reliable Partner in Integral Manufacturing" Prof. Kenichi Ohno (GRIPS/VDF)
12:00-13:15	*Lunch <will be served>*

Afternoon Sessions

	Session 1: Economics and Business	Session 2: Social Issues
	Chairperson: Prof. Kenichi Ohno (GRIPS/VDF)	**Chairperson: Prof. Izumi Ohno (GRIPS/GDF)**
13:30-14:30	"Macroeconomic Policy Analysis of Vietnam: A Macro-Econometric Model Approach" Mr. Le Anh Minh (Nagoya University)	"Living arrangements of the Vietnamese Elderly People during Economic Transition" Prof. Wade Pfau (GRIPS)
14:30-15:30	"Competition and Privatization in Vietnam: Substitutes or Complements?" Mr. Vu Thanh Tu Anh (Fulbright Economic Teaching Program)	"Seeking for Effective Performance, Minimum Cost, and Good Official Development Assistance (ODA) Performance Evaluation - Case study: Bach Mai Hospital, Vietnam" Mr. Tadashi Kikuchi (Keio University)
15:30-15:50	*Tea break and One-page Presentation Display*	
15:50-16-50	"Quality Management and Competitive Performance: An Empirical Evident of Impact of ISO 9000 in Vietnamese Manufacturing Companies" Mr. Phan Chi Anh (Yokohama University)	"Between Nurturing and Nurtured Childhood Children Working on the Streets of Hanoi" Ms. Aiko Takai (University of Amsterdam)
16:50-17:50	General exchange of ideas and information	
17:50-18:00	Closing Remark	

MORNING SESSION
<Keynote Presentations>

Fear of Flying:
Why is Sustaining Reform so Hard in Vietnam?

Dr. David Dapice

Professor, Department of Economics, Tufts University,
Fellow, Vietnam Program, Harvard University,

1. Background

It has been twenty years since the *Doi Moi* reforms were launched in Vietnam and the economy has been transformed in that time. The well-known turnaround in agriculture – from hyperinflation and food shortages to price stability, higher rural incomes, and top-tier global rice exporter – has often been told. On top of this have come successes in coffee, rubber, seafood and fish, and many other agricultural products. "Going private" in agriculture was an astonishing success that reduced poverty more than anything else in the first decade of reform. Poverty declined from about ¾ to under ¼ in two decades, in spite of the collapse of the Soviet Union, the major aid giver and trading partner of Vietnam.

Then there was the striking decision made in 2000 to allow easy registration instead of licensing of most formal private business. The result was over 120,000 new firms, millions of jobs and billions of dollars of investment capital mobilized. In terms of gross industrial output, the share of the domestic private sector has risen from 1/4 in 2000 to 1/3 in the first quarter of 2006, taking more or less equal shares from both the state sector and foreign sectors. The state's share in industrial output growth is now only 15-20%, in spite of taking higher levels of capital and educated workers than the private sector. Here again, relying on the private sector has paid off incredibly well, helping to extend the reductions in poverty and accelerate GDP growth from an already healthy level.

There has also been an open door policy to most forms of foreign investment, and after an initially slow period after the Asian Crisis, it appears that foreign interest in Vietnam is growing strongly. Part of this might be due to increasing tensions between Japan and Taiwan (two major investors) and China. Increasing reluctance to put all their FDI eggs in the China basket has helped Vietnam, but improving policies, infrastructure, and productive and fast-learning literate labor have also contributed. Certainly, the interest of Intel and Microsoft comes not only from cheap labor! Approved licenses for new investment and higher allowed reinvestments in existing projects exceeded $5 billion in 2005, and realized FDI should be $3 to $4 billion in 2006. Inflows in 2000 were under $1 billion. This is a high level of FDI, higher even than China's on a per capita basis.

The growth in exports is another indicator of success. Exporting requires efficiency – one is competing against the lowest cost suppliers in the world. From $2.1 billion in 1991, exports grew to over $32 billion in 2005. This is a compounded growth rate of 21% a year over fourteen years. Moreover, there were many products that exceeded $500 million in export value – crude oil, coal, garments, footwear, seafood, rice, coffee, rubber, electronics and furniture. Vietnam is proving its competitive ability in agricultural raw materials, minerals, labor-intensive goods, and even some higher value-added goods. It is significant that export growth continues even into 2006 at a rapid rate (25%), and entry into the WTO should help maintain future progress.

Indeed, given the declines in poverty, growth in real GDP, exports, and industrial output, improvements in education and health, and obvious signs of prosperity in the cities, some might simply give Vietnam a grade of "A" and be done with it. Those familiar with the author's habit of analysis will not be surprised to find this is not his conclusion. Not only in spite of but because of the very successes outlined above, it seems to be difficult for Vietnam to move decisively in the direction that its past remarkable successes clearly indicate. Vietnam's leadership is not stuck, but it is torn. Parts of it fear that giving ground too quickly on state owned production would be dangerous politically, even if sound economically.[1] Because so much of the legitimacy of the government and Party is built not only on the resistance struggles, but also on more recent and very positive social and economic accomplishments, this position might be hard to understand. The paper will analyze it from a foreign economist's perspective. Its conclusions may inform future discussion concerning the right mix of policies going forward.

2.   The First Decade

Vietnam tried to graft central planning on top of a poor, rural economy after the 1975 unification of the country. In the north, the ending of war and familiarity with collective agriculture allowed for little progress – a 22% rise in food output from 1974 to 1986, which was slower than population growth. This approach also worked poorly in the south, where the drive to collectivization was passively resisted. However, increasing cultivated area for annual crops by 30% via irrigation investments and introducing improved varieties helped boost 1986 rice output by 39% over 1975.[2] Even so, there were food shortages and hyperinflation. (The latter was a monetary phenomenon, but it could not have helped to improve the allocation of resources.) Output of paddy in all of Vietnam rose from 11.8 million tons in 1976 to 15.1 million in 1987, a 28% increase. But since population grew 27% in the period, there was virtually no improvement in per capita rice availability. It was not impressive for a country recovering from war.

After the *Doi Moi* reforms, food output rose to 25 million tons by 1995, a 65% jump over 1987, or about 40% per capita. This jump, along with a loosening up of labor movement, helped to push poverty rates down sharply. Poverty rates described as "well above 70%" in the mid 1980's[3] fell to 58% in 1993 and 38% in 1997-8 – a probable halving in 12 years.[4] Output of real GDP rose in a similar manner, with growth of 7-8% a year in the 1987-96 period. Estimates of real output growth in the earlier 1980's are unreliable due to many factors, but electricity output rose 56% from 1980 to 1986, 73% from 1986 to 1992 and 115% from 1992 to 1998. Taken together with the progress in agriculture, there is every reason to believe that real output also saw a 50-100% faster rate of growth under *Doi Moi.* Indeed, it was not just that output grew faster – it was also more attuned to the market. If exports are any indication of ability to respond to market opportunities and tastes, then the progress is nothing short of astonishing. In 1986, exports were about $500 million, or less than ½ of imports of $1.1 billion. By 1997, exports of $9.2 billion were equal to 80% of the $11.6 billion in imports. This 18-fold jump in exports created a huge opportunity to buy both capital goods and consumer goods. Because of aid, remittances and FDI the trade deficit was

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[1] Some others think that state-led heavy industry is needed – both politically and economically.
[2] Rice output in the South had grown 45% from 1965 to 1975 in spite of the war. See Appendix to The Rice Economy of Asia, Beth Rose, 1985 Resources for the Future, p. 156
[3] This comes from p. 35 of Doi Moi and Human Development in Vietnam, 2001, National Centre for Social Sciences and Humanities, Hanoi, 2001. Poverty estimates in the 1980's are educated guesses.
[4] The 1993 and 1997 poverty estimates come from the Vietnam Living Standards Surveys, supported by the UNDP and the World Bank. They are generally regarded as reliable.

easily financed. Inflation remained low and the exchange rate depreciated at a controlled rate that reflected a desire to maintain competitiveness.

The social indicators also improved during this decade. Enrollments in primary and middle schools, already high for a low-income country, grew more or less in line with student-age populations, but the enrollments at secondary and tertiary levels showed sharp gains. Secondary students actually dropped from 911 thousand in 1986/87 to 564 thousand in 1992/93 as subsidies were cut back, but then jumped to 1390 thousand in 1997/98. (The population of 15-17 year olds rose 17% from 1986 to 1997, but secondary enrollments rose 53 %.) The collapse of the subsidized education system was overcome by increased spending from private sources, and also from public sources after an initial period of austerity. In tertiary education, the students dropped from 126 thousand in 1986 to 107 thousand in 1991 but then rose to an astonishing 663 thousand by 1997! While quality issues remained a concern, the raw numbers showed impressive gains.

The health data also show gains from an already impressive level. The under-five mortality rate was estimated at 82 per 1000 in 1979-83, falling to 69 in 1984-88 and 55 in 1989-93. (These estimates are based on Intercensal demographic surveys from the GAO – different sources show different estimates.) By 1997, the rate had fallen to 40 per 1000, similar to the 38 of Thailand with more than triple Vietnam's per-capita income. Improvements in nutrition and an ability to buy medicines, along with an aggressive vaccination program helped to bring life expectancy up to levels typically associated with middle-income countries. By 1997, men had a life expectancy of 66 years and women of 71, again virtually identical to Thailand's level, close to that of China and actually better than that of Brazil.

However, the very successes of the economy and the society gave rise to a perverse caution and even reaction within the leadership. Highly dubious and low-return government investment projects were initiated. (The north-south power line was rushed through, reportedly against the advice of technical specialists. It delayed the development of adequate thermal generating capacity and contributed to uncertain power supplies.) Import-substituting industrialization, often in forced combinations of foreign investors and state enterprises, created bad feelings and high costs. There was glacial reform in privatizing (or even equitizing[5]) state enterprises[6] and the financial system. The regulatory system was heavily stacked against formal private sector businesses of any but the smallest sizes. One World Bank study found most of the reform in Vietnam up to 1996 came before 1991 – that is, before significant aid flows![7] As aid increased, the share of the state in total investment actually increased. By 1997, the state sector accounted for over 47% of gross industrial output, while households had 14% and mixed and foreign-connected output (including oil) covered another 36%. Formal (larger) private and collective industrial output accounted for all of 3% of total industrial output![8]

It was almost as if there was an ideological preference for inefficient investment and policy. This preference was indulged in good economic times but was adjusted when economic hard times or disaster threatened. This approach was not likely to produce the fastest poverty reductions or the most equitable outcomes, but it did create a kind of political

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[5] Because of aversion to "private" firms of any size, the solution to inefficient state enterprises was to turn them into joint-stock companies with state entities owning a controlling share. This is called "equitization."

[6] The often-quoted reference to "thousands" of SOEs being privatized in the early 1990's is misleading. They were mostly small. Local enterprises outside of the central planning system, accounting for little employment, capital or output. The resources were easily redeployed locally as the economy grew.

[7] Assessing Aid, What Works and What Doesn't, World Bank, Oxford, 1998, p. 107.

[8] Statistical Yearbook, 1999, Statistical Publishing House, p. 168.

equilibrium within the various elite groups. While the increase in oil, aid and over-enthusiastic FDI did provide a period of high growth in the 1990's, the growth was not self-sustaining. While the momentum of agricultural and price reforms created real progress and helped to reduce poverty, the lack of deeper reforms in the first decade set the table for a slowdown following the Asian Economic Crisis. This is in spite of rapid advances in electricity, roads, and other infrastructure. The problem was not "hard" but "soft" infrastructure - the lack of institutions and policies that recognized constraints to production and acted to reduce them, and thereby liberate and regenerate even more productive forces. The economy was still somewhat inward looking.

The limited positive role of the state shows up in changes in employment over the 1990's. State sector employment, including government and state enterprise workers, dropped from 4.1 million in 1987 to 3.1 million in 1991. It briefly dipped a bit more (2.9 million in 1993) and then crept back up to 3.27 million in 1997. (In 1987, total labor force was 28 million and in 1997, it was 37 million.) *So, **over 100%** of all new jobs created from 1987 to 1997 were outside of the state sector.*[9] The state share in 1997 was only 9% of all jobs. This is a negligible role for the state in a critical variable. Without new job creation, there is no equity or stability.

In comparison, investment outlays from all state sources compared to total investment fluctuated at around 50% during the 1990's, with a distinct rise in the second half. It has to be said that only state and foreign investment estimates are even somewhat reliable – the domestic private sector was not only small, but was also often invisible to the statisticians – or at least was for much of this period up to 1995. Starting in 1995, when there was an industrial census, the coverage improves somewhat. In any case, the state share of investment was 42% in 1995 and 58.6% in 1999, a real increase of over 110%. The private sector grew 34% in the same period and the foreign sector actually declined 12% in real terms. By 1999, the foreign share had fallen to 17.3% (from 30% in 1995) and the private domestic share was 24% in 1999, down from 27.6% in 1995.[10] While some of the state investment jump was due to needed increases in roads and other infrastructure, much of it went to ill-chosen projects or inefficient state enterprises that created few jobs. It is hard to have reform when the state takes a large, growing and inefficient role in investment, and that is where Vietnam was by the later 1990's.

Regional Equity?

An important political and economic factor in growth is regional balance. That is, all of the growth should not take place in and around one or two cities. The *Doi Moi* agricultural reforms were notable in their wide impact – thus the rapid and large poverty reduction. Most FDI is concentrated in a few provinces – Hanoi, HCMC, Dong Nai, Binh Dung and BR-VT.[11] Therefore, there is political pressure to use state investment as an "equalizer" and ensure that growth spreads beyond the two major metro-areas. One notable investment decision, the Dung Quat oil refinery, was made with the justification of regional balance. Of course, it made no economic or financial sense. Many foreign oil companies, interested in participating in building a refinery, exited when that place was required. Why build a refinery far from either raw material sources or major markets in a typhoon area? Even Petro-Vietnam wanted to build it in a commercially sensible place, at least as expressed in private conversations with the author. However the decision was made to proceed in Quang Ngai.

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[9] Growth of state jobs from the low point in 1993 to 1997 still accounted for only 8% of all job growth.

[10] The investment data change over time with revisions. These are taken from Table 174 of the 2002 Statistical Yearbook.

[11] In The Real Situation of Enterprises, Table 14, the 2003 capital data of operating foreign enterprises shows 85% of capital in those five provinces. Licensed FDI is somewhat more evenly spread but still quite concentrated in and around the two major cities, even in 2006.

The delays and cost increases that followed were predictable. High refining margins now[12] would allow an operating refinery to recoup part of its expense, but by the time Dung Quat is operating, the margins will probably again fall towards the $4-5 per barrel ($35 per ton) level that is more typical of most operating experience. In normal times, the higher transport and capital costs will simply mean either higher prices of petroleum products for consumers or subsidies from the government to cover losses or low returns. This will hurt all enterprises and consumers. Ironically, it will help Quang Ngai very little. In spite of putting large investments into infrastructure, there will be few jobs or linkages into the local economy not driven by further state investment. The neighboring province, Quang Nam, has a better chance to develop FDI and local industry and a sustainable and growing economy if it can implement its "open door" policy.[13] Successful regional development is seldom achieved by uneconomic and capital-intensive heavy industry investments. A combination of smart infrastructure and a better operating environment, combined with training and targeted marketing, is far more likely to succeed. But the old system stays alive, using up capital and providing few of the equity benefits used in justifying itself, or doing so at a very high price.

If we take the period from 1993 to 1998 and use the two Living Standards Surveys, we find that real per capita spending jumped 79% in the Southeast, 57% in the Red River Delta, and only 19-33% in the Northern Uplands, Mekong Delta, Central Highlands or South Central Coast. So, while all regions were rising, the regional concentration began exactly in the period when state investment was increasing as a fraction of the total.[14]

3. The Second Decade

Part of the large *relative* increase in state investment was due to aid and rapidly rising credit to state enterprises. But another part of the reason was due to actual declines in foreign investment and sluggish private investment growth. Part of the foreign decline can, of course, be tied to the Asian financial crisis, and the dire financial circumstances surrounding many of the firms that would normally have been investing. But it was not only that. As Vietnam expanded credit, it had its imports grow much faster than its exports. In 1992, exports and imports were about equal at $2.5 billion each. By 1996, exports had jumped to $7.3 billion but imports had soared to $11.1 billion. The trade deficit in 1996 was more than the export or import **level** of 1992! The response to this was to impose various controls, including making it more difficult for import-competing firms to turn their *dong* profits into dollars and take them out of the country. In fact, a rule was made that most foreign exchange had to be converted to local currency, and the foreign exchange earned by the foreign firm had to be approved for their own external use. This did not impress foreign investors who backed away. FDI inflows (not just the amount licensed) had averaged $2 billion from 1995 to 1997, but fell to under $800 million in the next few years.[15] That is a 60% decline.

In addition, the domestic private sector was weak and subject to demands from officials for payments for registration, permits and other necessary permissions. Private investment – more likely to be spread out among poor provinces than FDI and more labor intensive than state enterprises – was growing very slowly. In addition, the size of private firms was small

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[12] The difference between the value of refined products and the cost of crude oil input is the "crack spread" and this tends to be cyclical. It can go as low as $2-$3 a barrel (159 liters) and as high as $10 to $15, but tends to average out to $4-5 or so a barrel. The term is primarily used in commodity hedging.

[13] A positive development is that Quang Ngai has adopted asked for many of the same degrees of policy freedom and received them. However, proper implementation in either province will be complicated.

[14] From <u>Living Standards During an Economic Boom – The Case of Vietnam</u>, Haughton, Haughton and Phong (editors), 2001, Statistical Publishing House, Hanoi, p. 41

[15] Table 3.1 from <u>Vietnam 2010: Entering the 21st Century</u>, World Bank Report 21411-VN, 2000.

and their level of technology was low. In 2000, there were exactly **ten** domestic firms without state or foreign capital that had total worth of at least $33 million.[16] The lack of supplier industries and FDI meant slower export growth and FDI inflows too, though the Asian Crisis also hurt. Exports had tripled in dollars from 1993 to 1997, an annual growth of 32%. From 1997 to 1999 they grew at 12%. With a weak private sector, low and declining foreign investment, and an inefficient state sector it was not surprising that GDP growth faltered. From the 8-9% rate up through 1997, the official GDP growth rate (thought to be overstated by many) was 5.8% in 1998 and 4.8% in 1999.[17] Of course, this is much better than the crisis-affected economies, but Vietnam did not have a convertible currency or an international currency market in which banks or businesses could operate, so it was less vulnerable to capital flow shifts.

4.   An Aside: Slowdowns, Socialism and Corruption

The slowdown caused some introspection among the leadership. Some had drawn the lesson from the Asian Crisis that a more closed and controlled system was safer than a more open one. Capitalism caused crises and who wanted to be like Thailand or even Indonesia? On the other hand, slow growth was not acceptable either. Young people needed jobs, and many did not want to work in the low-income farm sector, which had been forced to absorb 74% of new labor force entrants from 1997 to 1999, compared to only 58% from 1994 to 1997. Such low nonfarm job creation was not tolerable for a sustained period. Fundamental decisions had to be made. Would Vietnam negotiate a bilateral trade agreement with the US or not? (This was effectively a necessary prelude to joining the WTO and moving towards a more open economy.) Would it allow private firms to be created and grow with less interference? Some feared that doing so would undo socialism and give rise to instability. Others argued that instability would result from sluggish growth.

One of the more durable debates within some parts of the Vietnam establishment is about the correct definition of socialism. There are a variety of views. Some use the "classical" definition in which the state owns the means of production. Others say it is a philosophy, and others still say it is a political system with a single party that has essential control over the distribution of production. Those that might be called conservatives view a strong and large state sector, especially in industry, as critical to the strength of the Party. Those that might be called reformers or perhaps pragmatists are more willing to let efficiency dictate productive outcomes, which in practice means a relatively larger private and foreign share of output. This latter group argues that success is what creates stability and the Party will stay in power longer if it raises incomes broadly and creates a dynamic economy and fair society with basic social goods for all. In practice, these views overlap somewhat, and the usual overlay of ministry, provincial and personal competition will often determine the exact position of a person or group.

In addition, there is the force or factor of corruption. The Thai Binh troubles in 1997 illustrated the importance of reining in local officials who became too oppressive.[18] The case

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[16] The Real Situation of Enterprises Through the Results of Surveys Conducted in 2001, 2002 and 2003, Statistics Publishing House, Hanoi, 2004, Table 3. It should be emphasized that $33 million is not a large amount considering the (much larger) cost of even one medium sized cement plant.

[17] World Bank Report 21411-VN, Table2.2B. The IMF estimated GDP growth in 1998-99 at under 4% a year, and in 2000 the official GDP growth figure of 6.8% contrasted with the IMF estimate of 5.5%. Note it is possible to underestimate the level of GDP and yet to overestimate the growth of real GDP.

[18] Briefly, Thai Binh is a northern province close to Hanoi with a proud tradition of supporting revolutionary struggles. Veterans and mothers of soldiers who died in war marched on government and Party officials they regard as corrupt and "arrested" them. The matter was resolved peacefully.

was not unique – in other cases the central government has had to set aside local leadership because of questionable activities. The PMU-18 scandal in 2005-06 shows that sometimes quite large amounts of funds are diverted from their proper uses, and few believe these are the only example of such activities, especially if land deals are included. To the extent that offices or positions are bought, and corruption is necessary to rise within the ranks, the very existence of someone who is not corrupt threatens those who are. Thus, those who are corrupt will often try to sideline or eject those who are not equally vulnerable. If everyone has dirty hands, no one will demand that others take off their gloves! To the extent that this is true, it makes it difficult for honest and competent people to rise in organizations that have become corrupt. To the extent that it is widespread, it makes it less likely that the state will be capable of doing those necessary things that help to create a competitive and open economy. If roads and infrastructure are poorly built or much too expensive or too elaborate; if international loans are used for poorly planned and overpriced state enterprise investments; or if many positions go to those with connections rather than talent, then the economy will not work very well, at least over time. Corruption threatens long-term stability and success. In extreme circumstances, it even leads to immediate discontent.

Thus, the debate in 1999 about the role of the private sector (above the household level) and of foreign investors was a difficult one. Was it safer to be more closed or open? Did a large and expansive state enterprise sector make it more or less difficult for the Party to remain in power? Did a more open system reduce or increase corruption? In effect, the answer was a compromise, but one skewed towards allowing foreign and private interests more of a role. The decision of China to enter the WTO was one factor, but the need for more job creation was also a consideration. However, there was still a commitment to have the state enterprise sector play a "leading role," which can be understood as having a number of heavy industry "pioneer" state firms. It did not and does not mean that export, output or employment growth is mainly due to the state sector. Instead, it is a kind of industrial policy that seems to look at sectors that Japan or Korea developed in their earlier days, but tries to use state rather than private firms to implement the plans.

5.   The Enterprise Law

The decision in 1999, implemented in January of 2000, to reduce regulatory barriers to private firms was a major decision, perhaps the largest since the agricultural reforms of the late 1980's. No longer did a business person need approval of an official to start a legal business – it was a matter of registering and submitting the form. Of course, it was not quite that easy, but surveys indicated that the time, money and uncertainty surrounding the registration of a new business dropped considerably.[19] There had been fewer than 5000 new private business registrations a year from 1991 to 1999, and only 5000 in total prior to 1991.

The response over the next few years after the law was passed outstripped the expectations of nearly everyone. By 2005, over 120,000 new firms had registered – an annual rate of six times the 1990's![20] While some businesses had existed as household firms and

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[19] One Vietnamese expert, Madam Chi Lan, estimated that it still took 50-60 days and ½ of Vietnam's per capita income to register a private firm. However, this is much less than previously!

[20] Surveys of firms do not show nearly so many actually operating. Even so, The Real Situation of Enterprises show the nonstate firms to have numbered 35 thousand at the end of 2000 and over 64,000 at the end of 2003. There were 14.5 thousand private firms registered in 2000 and 69 thousand more in 2001 to 2003. Aside from those really operating but missed in the survey, some may not yet have started up and others had gone out of business. This is one reason to prefer employment or output to registration data.

chose to "emerge" once it was safer[21], most were really new. Of course, many of them died too. Estimates of gross industrial output growth from private domestic firms were typically 18-24% a year after the Enterprise Law took hold. Their share of industrial output was 33% in the first quarter of 2006, larger than the 30% state sector share. In terms of employment, there were about 1 million employed in both formal private and collective firms in 2000. (Collective and private are hard to separate in fact if not in theory; "private" includes single owners, partnerships and joint-stock companies.) By 2004, the labor force survey showed 3.3 million workers in collective and "private" [not household] firms. That is more than a tripling in five years. In the same time period, state enterprise employment in the economic sectors[22] rose from 1.9 to 2.1 million, while total workforce rose from 37.6 million to 41.6 million. Thus the total workforce rose by 4 million or 11%. So, of the total increase in workers, the formal private sector had absorbed nearly 60% and the state enterprise sector only 5%. Agricultural workers and farmers remained stable, and workers in foreign-invested companies rose by perhaps ½ million, or 12-13% of the total increase in workers.[23] Those remaining, equal to one million or 25%, were absorbed in nonfarm household or informal sector work.

If the formal private sector continues to grow above 18% a year and the foreign sector in the 12% to 18% annual range, it is likely that they will be able to absorb an even higher fraction of workforce growth in the next few years than the last five, given their now larger share of the total workforce. (SOE industrial output growth is typically less than 10% a year, while total industry grows about 15 %.) Since agriculture and much of the household and informal sector is often viewed as a "sponge" that provides livelihoods but not much of a future for young workers, it would be desirable to offer formal sector jobs to all new entrants. While some will choose to stay on the family farm or work in a household job, most would probably prefer to switch to higher paying formal sector jobs. There are also those workers who are now in agriculture or household jobs that would prefer to switch, even if they are not new entrants to the labor force. If the labor market can be tightened with sustained and rapid growth, then real wage rates would be forced up as they were in South Korea and Taiwan. Indeed, there are already signs of this. This would allow further progress in poverty reduction, but would also necessitate better technology and management so that productivity would rise in line with real wage rates.

The Weak Private Sector

In spite of quite rapid growth, the private sector in Vietnam is still weak. In its current condition, it would have to improve considerably to deal with rising real wage rates. Using data from 2003, the wages of workers in private firms were only 50-60% of central-state or foreign firms. In terms of number of employees, only 144 private firms had over 1000 employees, compared to 446 state-owned firms. In terms of capital, in 2003 there were only 44 private firms with assets over $33 million, including 17 joint stock companies with some state capital invested.[24] Note that these are the very largest out of over 60,000 firms covered in the survey – less than one firm in 1000 for the capital size of $33 million. The average private firm has a few dozen employees and about $3300 in capital per worker. These small and medium firms are not in a position to undertake research and development, or even serious technology surveys and acquisition. They find it difficult to penetrate foreign markets or even to qualify as suppliers in higher value-added supply chains. They are usually not well

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[21] A World Bank survey estimated that 45% of the firms had informally existed before 2000. It is unclear if these and the really new firms were growing as fast before and only now are being measured, or if the more liberal registration procedures also allow faster private growth. The latter is likely given labor force data.

[22] These include agriculture, industry, construction, trade, transport and communications.

[23] Because of oil, the output share of the foreign sector is QI, 2006 was 37.4%.

[24] The Real Situation of Enterprises Through the Results of Surveys Conducted in 2002, 2003, and 2004, various tables

versed in using the Internet and their personnel often lack critical skills needed to compete in world markets.

This weakness is one reason why non-oil exports are growing much faster from foreign enterprises than from domestic firms. Indeed, non-oil exports from foreign firms were $3 billion in the first quarter of 2006 while non-agricultural and non-oil exports from domestic firms were $2 billion.[25] It is, of course, possible to have foreign firms be the "leading sector" and this has worked well so far. But unless local firms develop low-cost supplier chains (and these local firms will almost certainly be mainly private), it may be difficult to compete with countries where this advantage exists. Moreover, if Vietnamese firms export themselves, rather than through other foreign firms, they will certainly become more familiar with foreign tastes, trends, and necessary technologies. It would be highly desirable to find ways to help the private sector grow stronger, both for deepening domestic supply chains and for direct exports. How would this be done?

There have been many surveys done asking private firms questions about constraints to growth. Many items are mentioned – capital, land, technology, markets, skilled workers, and – especially – unfair or excess competition. Interestingly, corruption is **not** often mentioned by the private sector, even though international surveys find it is growing. A skeptic will say that any sector growing at 20% or so each year is finding ways around the barriers that exist. So long as private sector output and employment grow quickly, and overall exports are strong, why should it matter if private firms have barriers?[26]

Professor Ari Kokko, a specialist who studies private firms in Vietnam, argues that even if corruption is predictable and of relatively small amounts, it may still be a barrier. Bidding on construction and procurement is difficult or costly. Rules are set so that state enterprises get the primary contract and then dole out subcontracts to private contractors that do the work at a lower cost for little profit. Land development deals are often effectively reserved for state firms or officials. If the land issue is "solved" by renting in an industrial zone, there is no collateral for buying capital equipment. In short, as Kokko points out, there is a "missing middle" [and one might say, also a missing top] of the distribution of firms. "Most of the registered enterprises fall into the SME category…:95% [if] defined in terms of employment (less than 300 workers) or registered capital (less than VND 10 billion ($630,000),"[27] Meanwhile, the number of SOE's continues to number into the thousands, and the larger ones by capital or output have not been equitized. The development of a legal system that would provide real security is proceeding very slowly. The new Unified Enterprise Law is supposed to create a "level playing field" but if comments on drafts are accurate, it falls far short of doing that. It could well be that SOE's retain a favored position for some time. Given their small share of industrial output growth this might not matter, if they did not also absorb considerable capital and educated manpower and use them poorly.

6. Vinashin: Industrial Policy or Wasteful Spending?

One example of how supporting SOE's can undermine efficiency comes from Vinashin. This is a state shipbuilding firm that has signed a contract to build 15 ships of 53,000 tons. The price per ship is reportedly $26.5 million, an amount very nearly equal to the variable

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[25] This is from Intellasia, April 7, 2006. It provides data for a limited number of export products and it is assumed that all enumerated agricultural and seafood products are exported by domestic firms. It also shows exports by ownership. There is nothing wrong with exporting agricultural products, but they do not constitute "manufactured" products that have a capacity for rapid growth.

[26] A recent paper by Katariina Hakkala and Ari Kokko, "The State and Private Sector," February 2006, surveys the state of constraints and state policy nicely.

[27] Hakkala and Kokko, Op. Cit., p. 6

costs of labor, materials, supplies, power and insurance. Excluded from the amount is any significant return to the shipyard in which the ships will be built.

How much should a modern ship yard cost? In India, a modern shipyard with dual dry docks for 120,000 ton ships is being built for $90 million.[28] Reports in Vietnam put the cost at about $150 million. If two ships can be built side-by-side and if it takes 18 months to complete a ship, then (at 10% cost of capital a year[29]), about $10 million in fixed costs is <u>not</u> covered for each ship built.

Vinashin was at first reported to have been allocated all of the $750 million commercial bond issue that was floated last year. They have an overall plan to invest $3 billion in shipyards, steel mills, and other supplier industries. This investment would make Vinashin equal to ¾ the size of Hyundai, the world's largest ship builder with a 15% global market share. There is no indication that Vinashin has the technical or managerial capacity to justify such a large market share.

There is a plan for ship building in Vietnam to reach 5 million tons a year (about 10-12% of current global output) by 2015, with an export value of $1 billion and exports equal to 30-40% of total output. This plan seems to focus more on sales than return to capital. In general, other governments subsidize shipbuilding so profit margins are often thin or even negative. Thus, the ability of Vietnam in general and Vinashin in particular to compete with more established nations like South Korea or China is uncertain at best.

It is not hard to understand the thinking of the Vietnamese government. Shipbuilding is an industry that other Asian nations have entered successfully. It involves large amounts of money. It can be considered a "critical" industry. State support is common. Why shouldn't Vietnam follow the same path? Perhaps it should, but probably not in the way it is doing it. If a foreign ship builder wanted to invest and bring its own capital to the project, along with its technology and management that would certainly improve the chances of success. Or, perhaps there should be *some* competition for subsidies, if any will be allowed under the World Trade Organization, which is doubtful. Indeed, the entire idea of setting a physical target over a decade and using subsidies to reach it while also wanting to enter the WTO betrays a certain confusion. It is simply inconsistent to try to mix gaining access to global markets with plans and subsidies of this magnitude and nature. There is no doubt, if one or the other had to be chosen, what would be of most benefit to the national economy and to workers. There are over one million jobs now in export industries, but only a few tens of thousands at most in shipbuilding and its supplier industries.

6.1. State Industry for What Purpose?

State enterprises are used for different purposes in developing nations. A common use, though one that had been declining but is now coming back, was to exploit national mineral and oil and gas deposits. The prices of these commodities tend to fluctuate and large amounts of capital and often technology are needed to exploit the deposits. Since a government tends to want high and stable revenue flows, it is hard for a nationally owned oil company (for example) to invest at a profit-maximizing rate while also being asked to provide high payments to the government and often to provide jobs as well. Vietnam has not, in general, established production facilities through state enterprises except in coal. However, the "downstream" activities including refining and distribution are being assigned to state firms. The placement of the Dung Quat refinery was clearly political, and this does not augur well

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[28] The data come from ABG Shipyard Limited, an Indian private firm which provided the data as part of an initial public offering in late 2005. How many Vietnamese private firms raise new funds this way?

[29] It is true that the cost of the loan was only 7.25%, but that was a sovereign debt taken on by the government. Onlending to a company should result in a higher cost of capital, and most companies would feel very luck to get long-term hard currency finance at 10% a year, if it were available at all.

for competitively priced fuel products. If the state oil company is not efficient, then the entire economy will suffer from high costs.

Another common reason to establish a state enterprise is to develop high technology. The FPT company illustrates this impulse. The question with high technology is, what kinds of firms induce high technology FDI, especially in joint ventures or tight supplier relations? While much remains to be seen, the biggest success thus far is in the "technology park" in HCMC in which both foreign and domestic, but overwhelmingly private, firms have invested. It was in HCMC that Intel has decided to invest. Can a firm like FPT truly promote high technology in Vietnam? Its favored status will lead firms like Microsoft to consider working with it, but primarily to localize Microsoft products into Vietnamese, and to provide "help desk" and updating support for them. This is a useful function, but not really more than supporting a necessary local service to sell their software. It is not a way to get into the outsourcing and export of services that has been so successful in India. (Probably the best thing that the government could do for outsourcing is to improve the quality of IT education in the universities and support any firm that emerges with few requirements in terms of registration, paperwork or inspections. Improving the capital markets might help too, though the IT services business is not terribly capital intensive.) If FPT gets a large fraction of government IT work, it will be able to hire large amounts of local talent, making it more difficult for other firms to compete on other large projects. This might stifle competition in the sector and actually retard the development of outsourcing in Vietnam. There can be costs to having one national champion, especially if it is not the most competitively managed firm.

A third reason, and this seems to predominate, is to have certain heavy or strategic industries run by the state. It is hard to know exactly what causes this desire. It could be a kind of leftover fascination with heavy industry, harking back to the time of Lenin and Stalin. It might reflect a desire to do what Japan and South Korea did with their industrial policy some decades ago, though those nations did it with private firms and far more competition. Finally, it might simply reflect a desire of SOE's and ministries to have a larger role. Big contracts can be lucrative to award and jobs for friends and relatives are always welcome. Whatever the mix of motivations, the cascade of decisions in oil refining, ship building, fertilizer, petrochemicals, steel and (earlier) sugar and cement seem to suggest a strong attachment to this form of industrial policy.

It has already been established that state enterprises provide a very small and falling share of job growth[30], a falling share of industrial output growth, and that they probably play a modest role in exports of manufactures.[31] They do employ 1.5 million workers in industry and construction (out of 7.2 million workers in those sectors in total), and account for a large share of nonperforming loans. Their stated profit rate to capital in enterprise surveys is under 3%.[32] None of these facts are compelling reasons to *increase* the investment in state enterprises. The chance of creating a competitive firm or industry with management having to be skillful in dealing with ministries and bureaucratic issues while also dealing with brutal global economic competition is nil. The announced trade strategy is to become more integrated with the global economy, while the industrial strategy seems to indicate continued

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[30] To repeat, state employment in industry, construction, trade, transport and communications rose 13% from 2000 to 2004 while total nonstate nonfarm employment rose 55% in the same period.

[31] Non-oil export growth in 2004-2006 was twice as fast in FDI firms as from domestic firms. Many of the successful exporting firms were private. Aside from processing and trading companies, the contribution of the state sector to manufactured exports may be quite modest. It is surely smaller than FDI firms.

[32] It is true that private firms show almost no profits, but this is widely viewed as under-reporting. The FDI firms that are jointly owned show profit rates of 15-20%, but not those that are 100% owned. The latter could be due to transfer pricing, whereby profits are shifted to low-tax jurisdictions. See Table 7 in The Real Situation of Enterprises for specifics.

large infusions of capital into firms likely to "earn" low or negative returns. This cannot help but to slow down growth, reduce equity, and increase friction with trading partners.

So, looking towards the future, it is likely that Vietnam will continue to try to have it both ways. It will try to establish or expand companies like Vinashin that enter into loss making contracts, while joining the WTO, AFTA and the Bilateral Trade Agreement with the U.S. If these SOE efforts are isolated and small in magnitude they will not upset very much. They will cause trouble and irritation, but not stop the larger development of a dominant and competitive private sector, which is already well under way. If the volume of SOE investments is large, it is likely to drain capital away from more efficient firms (that also create more employment) and also cause trading partners to retaliate by limiting exports of goods in which Vietnam is competitive. One question to ask is if the political needs that these investments reflect could be satisfied by less costly means. Could sensible infrastructure investment satisfy provincial desires for more local economic activity? Could better pensions, severance payments or job training relieve concerns of state enterprise workers? The answer to these questions is "probably." The problem comes more from the ministries and upper management. They want empires, not a comfortable retirement. They will fight to maintain the share of state investment.

6.2. When To Say Enough?

Every nation has some wasteful spending. Politics is a fact of life everywhere, and Vietnam is in no way unique. The question is if the system is able to detect when the waste is reaching unacceptable levels and a self-correcting mechanism cuts in and reduces the waste to a level that prevents severe damage. The strong economic and social growth in Vietnam might seem to argue that, whatever the problems, they are not severe. However, the high level of inflows from oil, remittances, FDI and aid suggest that the supposition might be turned around. Crude oil exports in 2006 will probably equal about $8 billion and net revenues about $5 billion. Remittance estimates vary but they could easily be another $5 billion – many estimates go much higher. FDI inflows are also debated – the IMF data suggest $2-$3 billion while government sources (which are not quite conceptually the same) suggest $4 to $5 billion. ODA disbursements less repayments are $1.5 to $2 billion. This totals perhaps 25% to 30% of 2006 GDP[33] from foreign flows or natural resource rents. If nonoil savings added 10% (of GDP) to savings and investments, and if the total were invested wisely, we would expect to see real GDP growth of 9-10% as in China, not 7-8%. If this reasoning is correct, the waste is costing Vietnam over $1 billion a year in lost growth – and that is just from this year. If this has been true for several years, the difference becomes very large, amounting to many billions of dollars each year as yesterday's waste depresses next year's output.

Even if the "lost" growth is less than $1 billion a year, there are still serious questions. Stability is necessary and less growth and equity reduces stability. If corruption were increased by this kind of industrial policy (as was true in Korea), that would create additional problems. There is some disagreement within the leadership about the best policy choices, and even about the degree to which news media should be allowed to report on the corruption and other issues that arise. These disagreements are normal and not a threat to stability, but they do frame the right questions. If there is to be a *systemic* check on excess waste, it is likely to be from a more open discussion and airing of facts. As the saying goes, "sunlight disinfects." Sunlight by itself does not prevent large errors, but it makes them less likely and increases the probability they will be caught earlier. The future stability and efficiency of policy probably depends on the ability of the leadership to allow this kind of reporting and discussion. Only if outside analysis and information can inform those who are not already

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[33] The IMF projects 2006 GDP for Vietnam at 890 trillion dong or about $55 billion.

decided can the system learn to say "enough!" Without this airing, one group or another might be able to gather massive illicit resources, buy off those supposed to oversee them, and create a seriously inefficient set of policies. Avoiding this is a key to sustaining the past successes.

6.3. One More Example – Education

Vietnam has done a good job of increasing enrollments in education. Primary enrollment is very nearly universal and secondary enrollments have risen to over 65%. These are very good levels for a low-income country. Enrollments at the tertiary level have risen from 137 thousand in 1992 to 1320 thousand in 2004 – nearly a ten-fold increase. (But college and university teachers have only risen from 21 thousand to 48 thousand in the same period.) Even where the number of teachers has risen more or less adequately, as in secondary schools, there is still a deep and probably justified fear that the quality of schooling is well below the standards needed to compete in a global job market. Many families try all sorts of strategies to get their children out of Vietnam even for secondary school and certainly for college. Stories of grade buying via "tutoring" by the same teacher who grades the student and of other abuses are common. Those who knew the system prior to 1990 complain that standards are lower in both an ethical and intellectual sense. In the colleges, it is widely accepted that levels of research and the quality of the curriculum, with some exceptions, is lagging badly[34]. Not one Vietnamese university is listed in the top Asian university lists created by various magazines or lists based on published research. This is in sharp contrast to China, India, Thailand, Indonesia, and the Philippines which have universities that are listed.

Why should it be so hard to find a way to create universities as strong as those in Indonesia or Thailand? Vietnam has a proud history of distinguished writers, intellectuals and scientists. It has a culture that has respected learning. It has a literate people and wide access to education, which is currently seen as very important by most families for their children. Yet in spite of this high demand, there is thought to be a poor quality of supply. (Vietnam does not allow standardized international testing of secondary students, unlike Thailand, Indonesia, Malaysia, the Philippines, Singapore and South Korea so direct comparisons are not possible.) With so much demand and so much capacity, why is it so hard to produce better results?

The answer has to do with the slow pace of institutional change in Vietnam. The Ministry of Education has tended to delay fundamental reform and discourage competition from "free lance" or private schools. It tended to insist (at least in the past) on a standardized curriculum when experimentation might have allowed better materials for different types of students. This inefficiency and lack of internal reform is a huge problem in education, but is also true elsewhere. Note that no argument is made that "the free market" will solve all problems. Standards are needed and professionalism needs to be nurtured. But the quality of state oversight and supervision needs to be improved, as does the freedom to try out different approaches. Pressure on the bureaucracy from either elected officials or parents of students or the press needs to be focused in a way that better results are created. Right now, many want change but few know how to get it productively.

This lack of effective reform is a huge long-term stumbling block for Vietnam. It curtails the development of local centers of excellence, R&D capacity, and an ability to move to higher value-added activities. It creates political tensions, as normal families feel trapped and angry that some are able to "exit" and send their children abroad. It can even have an

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[34] The Vietnam Education Foundation, a US sponsored scholarship group, has had success placing numbers of Vietnamese in IT and electrical engineering graduate programs in the US. This is probably based on the strong historical foundation in mathematics, partly from Russia, and the low capital requirements for successful work in this field. On-line training and communication also help in this field.

impact on the ability of Vietnam to attract its brightest workers back to the country. If only poor jobs are available in small and weak private firms, with few other well-trained workers, why not stay abroad? If good SOE jobs (or promotions) go mainly to the well connected, why not work for a multi-national that will train its workers and treat them fairly? The lack or slow pace of institutional reform will only become a larger burden as Vietnam opens up itself more in economic and cultural terms. The ability of Vietnam to design a "top tier" university and use it to promote reform throughout the educational system will be a litmus test of its ability to accelerate needed educational reforms.

6.4. Some Bright Spots

This paper has focused on critical comments and problems facing Vietnam. Some might argue that any country increasing exports at 25% a year and growing at 8% is not doing so badly, especially if this progress is accompanied by tolerable to rapid progress on social and poverty indicators. That is a fair comment. The point is not that the present is so bad, but that it will take efforts to make the future equally good. As per capita output rises, it gets harder to continue rapid growth without improving all around. But it is useful to consider some areas of exceptional success and the reasons for them.

The SARS epidemic and the current bird flu situation allow a contrast between Vietnam and some other nations. In both cases, Vietnam's response was better than many others. With SARS, Vietnamese leaders brought international experts in quickly, and needed precautions were taken with little delay. In contrast, the disease reportedly festered for months in China amidst cover-ups and suppressed information. It was only when a famous Chinese doctor "broke" the story about cases in Beijing that the full scope of problems began to be addressed. It required the resignations of major Chinese officials. With bird flu, after some initial stumbles, an aggressive campaign that included vaccinations and culling helped to reduce the incidence of the disease in birds and seems to have eliminated it this year in people. In Indonesia, the response has been more fragmented and cases in both birds and humans continue to mount. While it is too early to evaluate the ultimate success of the bird flu efforts, the initial consensus is that Vietnam has been open and effective.

While many problems persist with health care, the decline in mortality rates is striking especially compared to other nations with much higher incomes. The following data are taken from the 2006 World Development Indicators of the World Bank. (Tables 1.1 and 2.19) Life expectancy is in years; mortality rates are per 1000; and income is per capita.

Country	Life Expectancy 1990	Life Expectancy 2004	Child Mortality Rate 1990	Child Mortality Rate 2004	PPP Income 2004
Brazil	66	71	60	34	$7940
China	69	71	49	31	$5890
Thailand	68	71	37	21	$7930
Vietnam	65	70	53	23	$2700

It is not just that Vietnam is about equal to or better than nations with two or three times their income per capita, but that it is improving as fast or faster. No other nation in this group had child mortality declines as large in either relative or absolute terms.

Similar comments could be made about HIV-AIDS. While it remains a serious disease, the 2003 prevalence, even using unofficial (and higher) numbers of 300,000 infected cases, is only 0.4%. Most cases are in injecting drug users and sex workers. While cases are rising, the mobilization has begun and levels are well below the worldwide prevalence rate of over 1% or regional (South and Southeast Asia) levels of 0.7%. Vietnam appears to be one of the nations that caught the disease early enough and is acting to contain it before it becomes a major cause of mortality. Similar successes have been achieved in the control or treatment of malaria, TB, child malnutrition, and vaccinations.

What explains this success? Part of the explanation is timely public health program, utilizing a well-organized apparatus down to the village or block level along with a serious commitment to actually executing the plans. In addition, there has been a loosely regulated, overlapping, and not entirely efficient mix of providers from traditional herbalists and healers to pharmacists to retired military medical workers and nurses to private doctors to public clinics to hospitals. Sometimes pharmacists sell inappropriate, out of date or counterfeit medicines. Sometimes doctors insist on mixing their own medicines and charging more for them – even to the point of not informing their patients what they are getting. But people have choices and there are many sources of service. Increasing the variety and level of expertise of different types of medical personnel while also providing as much information as possible to patients and the general public, while continuing to give them choices about where to go, is likely to improve health care. A combination of appropriate government spending and policies, regulation of providers for knowledge and ethical behavior, and competition helps to provide these outcomes. There is no doubt that health care at existing spending levels (5.4% of GDP – about the same as China) could achieve even better outcomes, but it is already doing as well as much richer nations that started out healthier even a decade ago.

Switching sectors, the rise of trade is another bright spot. It would not be surprising if exports and imports in 2006 equaled $72 billion, or about 130% of GDP, up from 75% in 1995. By lowering tariffs and allowing easier licensing of trade, Vietnam has accelerated the specialization of its production. So long as this process continues, it will be very difficult for seriously inefficient sectors (outside of nontraded services) to remain untouched. While some observers, such as Oxfam, have attacked the WTO conditions[35], most conclude that the gains are likely to far outstrip the costs. The critics may be correct that the world in general and trade negotiations in particular reflect power realities, but that is a separate point from whether or not an economy and the poor on balance will benefit or not. In other words, if there are significant gains from trade and investment flows, how are they to be distributed among nations and within them? If increasing trade is so dangerous, why has poverty plummeted, social indicators soared and incomes broadly gained so much over the last decade? Apparently, the flexibility of farmers and the private sector, the responsiveness of FDI, and the ability to learn quickly have resulted in many more winners than losers. A continuation of this trend is likely to continue to be beneficial, though sudden and severe instability in the global economy remains a threat to all but the most closed of economies. Still, Vietnam appears to be more flexible than most and is fairly well diversified by product and country market.

6.5. The Financial Sector

Turning from bright spots to less certain sectors, the future development of the financial sector is a major question. The relative size of the financial sector has grown rapidly. Domestic credit grew from 35% of GDP in 2000 to 68% in 2005. While this level is still well below those in other developing Asian economies, it is certainly rapid growth. Indeed, the IMF has expressed concerns about the pace of credit growth, the inability of (especially) state

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[35] Do as I say, not as I do: The unfair terms for Viet Nam's entry to the WTO, Oxfam, May 2005

owned commercial banks to control loan quality, and generally weak balance sheets.[36] The legal system is also questionable, so even if a borrower *might* have the assets or capacity to repay, it is less than certain that they actually will do so, or could be compelled to at a reasonable cost. Yet, bank credit to nonstate borrowers rose at 45% in 2004, suggesting remarkable optimism. (Bank credit to state enterprises grew 36% in 2004, but they also were able to access nonbank credits, such as the Development Assistance Fund, growing about as fast as overall bank credit.) If credit grows at 25% a year for five years and current price GDP at 15% a year, credit/GDP would exceed 100%. That would put Vietnam in the same range as other Asian economies.

The recent conclusion of WTO negotiations with the United States resulted in an agreement to let foreign banks own 100% controlled subsidiary banks. While it remains to be seen if these banks are regulated in an even-handed manner, the direction of this policy change would be to "regularize" the banking system. Foreign banks are generally acknowledged to be better at credit analysis and less prone to political pressure than state-owned commercial banks – though even the SOCB's have improved in recent years[37]. If banks were able to provide private firms with credit more readily, it could only help them to expand more rapidly and perhaps with the help of specialist expertise that foreign banks often provide small and medium businesses. Certainly, the creation of more effective competition would help make the banking system a more effective accelerator of private sector expansion. (Efficient state enterprises would also benefit.) The concern, of course, is to prevent excessive risk taking and to avoid credit crashes that create contractions in economic activity, or expensive government bailouts. Dealing with the remaining bad loans and controlling corrupt or inefficient lending will remain major goals of the monetary authorities.

The other end of the financial system is the stock exchanges. The HCMC exchange, with a few dozen companies, has yet to prove itself much more than an exit mechanism for established companies (mostly equitized state companies) looking to offload shares. It is not yet a serious source of finance for new investments, and it will probably be some time before it becomes one. It lacks the depth and liquidity needed for general Asia-centric or emerging market funds, but has attracted Vietnam specific funds in limited amounts[38]. The OTC market in Hanoi is even younger. The informal or dealer market is perhaps the most interesting but is hard to follow or readily analyze. The reasons why many companies choose not to list, but are still actively traded, is worth a special study by itself. Some have guessed that the value of trading on this dealer market is several times that of the official exchanges. With the accession of Vinamilk, Kinh Do and some banks, this is less likely than it had been a year or two ago. Still, the development of this institution has a long way to go before it takes an important place in the overall portfolios of Vietnamese (who still prefer land, gold or cash for the most part) or in the plans of company executives looking for finance. Until corporate and overall legal governance improves, it will be a risky place to put more than a fraction of one's savings. And, if it remains a risky place to invest, the cost of floating shares will be higher than many companies wish to pay. Progress has been made, but it is a few steps on a long road.

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[36] "Vietnam: 2005 Article IV Consultation," IMF Country Report 06/22, January 2006.
[37] The "big four" state-owned commercial banks control over 2/3 of all bank credit. If the Development Assistance Fund is added in, these five control nearly ¾ of all credit, including the DAF. The DAF lends about 90% of its assets to state enterprises according to a 2006 IMF Report.
[38] A typical day's trading has a total value of about $10 million. This amount is often a minimum for general equity funds that wish to establish or liquidate a position. The total value of all assets is $1.5 billion.

7.   Tentative Conclusions

The authors were asked to look both backward and forward with respect to the *Doi Moi* reforms. Looking back, they have been a great success, propelling Vietnam from a poor backwater to a leading developing country. They have liberated productive forces throughout the population and across the country, improving most aspects of life for most people. Where serious reform has been allowed and pursued, it has succeeded. Where it has been avoided or curtailed, there have been setbacks. Looking to the future, more reform is likely to pay more dividends in purely economic terms. The question for this paper might be if there is a political consensus to pursue reforms. That probably depends on how further reforms are pursued.

Vietnam is a paradox right now. It has a good deal of corruption and also a relatively open society and competitive (if still somewhat controlled) press and mass media. It is not an equilibrium to have people stealing money and to have many others knowing about it. Something has to give. Either there is a movement towards a stronger and more serious rule of law and less corruption, or there will have to be serious retrenchment and reduction of press freedom to report on problems. As argued, if the second option were to be followed, this would increase the prospect of instability and slower progress. If the former, then Vietnam would have an extended period during which political options could be worked out amidst a generally vigorous economic expansion. As Professor Benjamin Friedman argues in his recent book, The Moral Consequences of Economic Growth[39], there is a greater chance of social and political inclusion and progress when times are good than when they are bad. If these arguments are accepted, that alone would argue for a continuation of reform. Adding to this, the examples of sugar, Vinashin, and Dung Quat vs. most rice and coffee, the Enterprise Law and FDI, and there would seem to be both a political and economic case for deepening reform.

Yet these are not reason enough for the system to move quickly. Many provinces will remain skeptical that they have much to gain from reform. They see rapid progress in some major cities, but wonder if that means they will be left behind. In order to induce them to support reform, a different set of incentives is needed. Public investment should be more responsive to provincial reform rather than to provincial backwardness. Where measures such as the provincial competitiveness index[40] finds improving governance, there should be flexible support aimed at improving hard infrastructure where soft infrastructure has also improved. If pro-reform behavior is rewarded by Hanoi[41], and if it also results in more private and/or FDI activity, it is likely that more provinces will become supportive of more reforms. While this is not absolutely assured, it is likely.

Beyond this aspect of political support, there is education. If the state manages to switch from trying to control all education to fostering the growth of diverse but quality educational institutions, it will reap large political benefits. A better educated populace will earn more, attract more investment, start more productive firms, and generally be more supportive themselves of further reform while also supporting the government. It may be that Singapore is an example of this scenario – some limited political competition, but an effective

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[39] Professor Friedman is a macro-economist at Harvard University. His book has been widely acclaimed as a cogent defense of the moral benefits of economic growth, not merely the (considerable) material benefits.

[40] This is an index developed by the Vietnam Competitiveness Initiative (VNCI), a group supported by USAID. The Vietnam Chamber of Commerce and Industry and the Asia Foundation have played a leading role in VNCI, and Dr. Eddy Maleski is the lead author who developed the index. It reflects both structural and policy factors such as entry costs and access to land in arriving at evaluations of 42 provinces.

[41] An obvious danger is that if the score really matters, there will be attempts to make it look better than it really is. This may already have occurred and is certainly something to guard against. Using performance-based indicators such as the amount of private employment or output growth is one way to deal with this.

one-party system with wide general support. So long as the state provides quality public goods such as health, education and housing, it is viewed as legitimate. Of course, Singapore is viewed as one of the least corrupt nations in the world.[42]

The third forward-looking challenge is to either reduce the ambition of state industry investment or to attempt to improve the efficiency of what is undertaken. This author is not optimistic that competent managers will often be allowed to run efficient state enterprises. It is possible that this could happen, as is true now in Singapore and a very few other places. But unless the pressures on mangers change significantly, the state would be better advised to be modest and focus its energies on running a very few state enterprises that it really believes need to be public, rather than to expand aggressively. If SOE's expand aggressively, controlling corruption will be harder. There would be more frictions with trading partners, and useful private or FDI investment would be suppressed as capital and skilled workers are siphoned off.

The fourth challenge is to find a way to incorporate input from the private sector without letting it dominate policy making. Given the weakness of the private sector, this may seem to be an idle concern. But many private firms are run by well-connected people with close ties to leaders. It is quite likely that they would ask for, and possibly receive, various advantages which would be hard to identify and thus elude legal or WTO challenges. Diminishing public monopoly and inefficiency will have only modest benefits if it is replaced by private monopoly and inefficiency. This will become an ever-larger concern over time. It has proven to be the bane of several Asian economies.

Overall, though, most countries would like to have Vietnam's problems. Few have the chance to do so well. Good choices will continue to produce great results.

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[42] Transparency International, a European NGO, ranked 159 countries in 2005 by perceived corruption. Singapore was the fifth most honest. Vietnam was tied with Belarus and Zimbabwe in the bottom third.

Vietnam's Industrial Policy Formulation:
To Become a Reliable Partner in Integral Manufacturing

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Abstract

The Vietnam Development Forum (VDF) is a joint research project of the National Graduate Institute for Policy Studies (GRIPS) in Tokyo and the National Economics University (NEU) in Hanoi. It is part of the 21st Century Center of Excellence (COE) Program of GRIPS funded by Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT). One of the most important objectives of VDF since its establishment in early 2004 has been to support industrial policy innovation by Vietnam's MOI. For this purpose, VDF has organized a large number of workshops and research weeks, published books and research papers[1], and staged VDF-MOI joint missions to Thailand, Malaysia and Japan. VDF has also directly assisted the drafting of motorbike and supporting industry master plans, and commented on the overall, electronics, and automobile master plans, of the Vietnamese government. This paper presents a broad conclusion drawn from our policy research. It was originally addressed to Vietnamese policy makers. By re-presenting it to researchers in development and aid studies, we hope to receive their comments and suggestions as well.

1.   The Need for New Industrial Policy

Vietnam is deeply committed to global and regional integration, and no one doubts the seriousness of this commitment. Vietnam has already taken many steps to realize this goal, including the completion of the AFTA process, the conclusion of the bilateral trade agreement with the United States, intense negotiation for WTO accession, and preparation for other free trade areas (FTAs). Work is also progressing in the legal area, as the government doubles its effort to create or amend a large number of laws for consistency with international practices. All this is highly commendable.

However, diplomatic and legal preparations are not enough. In order for Vietnam to truly enjoy the fruits of international integration, its real sector must also be prepared. Vietnamese firms need to be competitive enough to survive and even prosper in the new open environment where import protection and special favors are, in principle, no longer allowed. And this is the area in which Vietnam's preparation is the weakest.

Free-market advocates may argue that, once the economy is open and free, the market mechanism will activate the ingenuity of the Vietnamese people and the national economy

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[1] See particularly Ohno and Thuong (2005) and VDF (2006b).

will grow and become more efficient. This argument is too naïve, and the majority of Vietnamese policy makers already know it. The fact is that the balance of power between large advanced economies and latecomer developing countries is lopsided. Vietnamese firms cannot at present compete squarely with Toyota, Panasonic, LG or Intel in the global market. Instead, they must work with these multinational corporations (MNCs) to improve their abilities and become crucial suppliers in their global value chain. A good policy is needed to encourage and support this effort.

But what kind of policy, more concretely? The days of planning are over. Vietnam can no longer use rigid control to maintain international isolation. The strategy of *infant industry promotion*, adopted by Japan and Korea in the early postwar period, is also out of question. Under this strategy, domestic industries were protected and nurtured until they became sufficiently competitive. But Vietnam cannot introduce such protection because of its commitments to WTO and various FTAs.

Even the strategy of FDI-led growth, exercised by ASEAN4 in the 1970s-90s, is no longer applicable to latecomers like Vietnam. Although Malaysia, Thailand, Indonesia and the Philippines vigorously absorbed FDI, they were slow to remove their tariffs, import restrictions and localization requirements. In these countries, FDI promotion and industrial protection coexisted for at least a few decades. External barriers were lifted only after they achieved significant industrial agglomeration. But Vietnam is asked to remove barriers *now*, before such agglomeration occurs.

For this reason, Vietnam's industrial policy in the 21st century must be new and different from those of other countries in the past. It must reflect the fact that even newcomers must open up very fast. Globalization is inevitable, and Vietnam must position itself to become a meaningful player in the global arena, making sure that its contribution to East Asia and the world will rise over time. What kind of policy can that be? That is the key question for the Ministry of Industry (MOI) in particular and the Vietnamese government in general to consider. That is also the question we wanted to address in this paper.

2. Weaknesses in Vietnam's Policy Formulation

To design and implement industrial policy in the age of strong globalization pressure, Vietnam must overcome two methodological problems. At present, master plans are designed and drafted by a small group of officials assigned for the task. They work very hard but cannot produce desired results, because crucial information and cooperation are lacking. More concretely, the weaknesses of Vietnam's industrial policy mostly stem from the following two missing links.

(i) The lack of cooperation with *stakeholders* (i.e., concerned groups) in the entire drafting and implementation process. In the case of industrial master plans, the most important stakeholder is the business community.

(ii) The lack of inter-ministerial coordination within the government in deciding concrete action plans.

These problems are unique to Vietnam as they are not observed in other high-performing East Asian countries. In our missions to Thailand, Malaysia and Japan, no serious problems were reported in either government-business cooperation or inter-ministerial coordination in formulating industrial policy.

The main problem caused by the lack of cooperation with stakeholders is that *policy is not supported by the business community and therefore not implementable*. This problem is particularly acute in sectors where private and FDI firms--which are not under MOI's direct

supervision--dominate, such as motorbikes, automobiles, and electronics. Even in areas where state-owned enterprises (SOEs) used to play key roles, such as steel and cement, the share of private and FDI production is rising. The drafting process must involve all key players, especially private and FDI firms. Without solid channels to absorb their information and concerns, policy remains ineffective.

Another problem caused by the lack of stakeholder involvement is that *information and analysis are neither to-the-point nor up-to-date*. Even if MOI drafters are intelligent and hard working, it is difficult for a small team to gather all relevant information. This is particularly true with external information such as global industrial trends or the latest strategies of MNCs. Such information should be obtained through close and continuous contact with the business community. A good policy cannot be built on outdated information.

On the other hand, the main result of the lack of inter-ministerial coordination is that *supporting measures are simply mentioned without details*. Measures outside the authority of MOI, such as tariffs and tax incentives or a reform of technical schools and universities, are especially hard to prescribe in detail, since there is no mechanism to discuss and agree on policy measures among related ministries in close consultation. At present, ministries interact only superficially through commenting on mutual drafts and exchanging basic information. This is another reason why timely and effective policy implementation is so difficult in Vietnam.


3. Good Policy, Modest Results

Thailand, Malaysia and Japan have all constructed effective channels for stakeholder involvement and inter-ministerial coordination in industrial policy making. Thailand has set up industry-specific institutes and official committees to link the government, businesses, and experts. Malaysia has a three-layer structure consisting of the Industrial Planning Committee, the Steering Committee, and technical resource groups, which together mobilize several hundred people to draft an industrial master plan. In Japan, deliberation councils and industry associations have long been the key instruments for sharing information among all stakeholders at any time. The functions of these institutions are explained in detail in VDF (2006b).

The experiences of these countries make it clear that Vietnam is far behind them in industrial policy formulation and that it has much to learn from them. It must be admitted that Vietnam's policy making method is in the early stage of development. It is still primitive and defective, and inherits many characteristics of the planning days which are no longer valid. Another crucial fact is that the way to achieve good involvement and coordination is not one, and that Vietnam should design a mechanism which is most suitable for its situation and needs. This means that Vietnam must selectively import the good practices of neighboring countries, with necessary revisions and additions, to suit its circumstances. Since institutional evolution is difficult to forecast or plan with any precision, the adaptive process will inevitably be a long one with many trials and errors.

However, there is also a negative lesson from Thailand and Malaysia that is worth attention. While industry-led growth of Thailand and Malaysia has been remarkable by the standards of developing countries in general, it falls short of East Asia's high performance criteria. These two countries are still unable to break through the "glass ceiling" after several decades of industrialization. The glass ceiling here refers to the difficulty in moving from the

second to the third stage in the path of industrialization that I have described on another occasion[2].

Figure 1: Breaking the Glass Ceiling
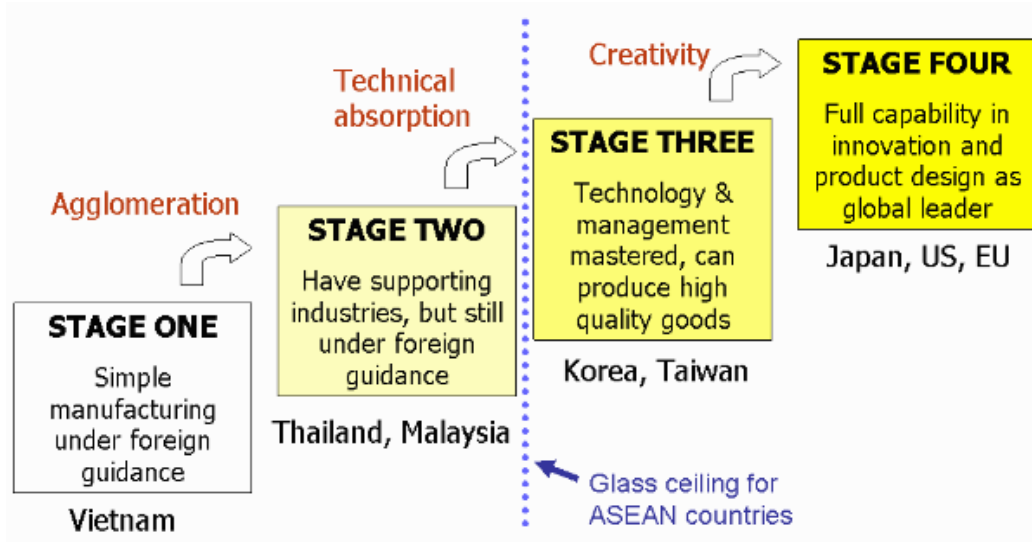
Source: see footnote 2.

A developing country in the catch-up process typically starts with simple assembly to fulfill foreign orders (stage 1), builds industrial agglomeration and supporting industries (stage 2), graduates from foreign guidance to master technology and management (stage 3), and finally achieves innovative, original design capacity (stage 4). I argue that none of the ASEAN countries has graduated from foreign dependency despite their quantitative achievement. They still rely heavily on foreign managers and engineers to run their factories and maintain quality. Since core competence and value creation are not internalized, there is always a risk that industries will shift to China or elsewhere when situations change.

The governments of Thailand and Malaysia are acutely aware of this problem and trying to remedy the situation as a matter of top national priority. Specifically, this requires strengthening SMEs and creating linkages among them, developing industrial skills, promoting supporting industries, stimulating R&D, and other efforts in human resource development. Nevertheless, local capability of Thailand and Malaysia still falls short of the high requirements of Japanese manufacturing FDI. This is a problem that has been recognized for a long time--at least for two decades--but remains unresolved.

At the risk of over-simplification, we may even say that Thailand and Malaysia are the countries whose governments have succeeded in offering good policy frameworks but whose domestic businesses remain less dynamic than expected. The gap between good policy and modest results is especially striking when we look at the performance of Taiwan and Korea. From the situation of war devastation and dire poverty, they emerged as leading manufacturers of high-quality products in a few decades. They received foreign technical assistance at first, but the time they spent for learning was relatively short. As soon as they

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[2] Kenichi Ohno, "Renovating Industrial Policy," chap.2, Ohno and Thuong (2005), pp.24-26.

mastered technology, they sent foreign advisors home. R&D, product design, enterprise management, and factory operation are now carried out entirely by locals. They invest vigorously abroad to expand production networks, and have become Japan's formidable competitors. And all this was achieved in no more than the time it took for Thailand and Malaysia to reach their current levels.

Why did Taiwan and Korea move up so fast, while Thailand and Malaysia learned more slowly? The reason may be the difference in national character or the difference in policy quality. If Taiwanese and Korean people are genetically more suitable for high-quality manufacturing than Thai and Malaysian people, there is not much the government can do to change people's DNA. But if industrial policies adopted by Taiwan and Korea have been superior in matching national aspiration with needed actions, we are compelled to study much deeper into policy design and implementation to improve the industrial policy framework and content of Vietnam[3].

Vietnam at present is a country of weak policy formulation. However, Vietnamese people are frequently praised as skillful, diligent and persistent in comparison with other peoples in the region. This points to a possibility of greatly upgrading the industrial capability of Vietnam once policy weaknesses are removed.

4.   Coping with China

How to cope with China, with its enormous size and rapidly expanding manufacturing capacity, has become one of the most urgent issues all over the world. China has large numbers of managers, scientists, engineers and unskilled workers, ample industrial materials, a relatively high level of technology backed by a long history of industrialization drive, and a thick network of overseas Chinese businesses. The China challenge looms large in the industrial policy debates of Thailand, Malaysia and Japan. It must also be a top issue in formulating Vietnam's new industrial policy.

It is clearly unwise to directly compete with Chinese products in the global market. To avoid this, a country must differentiate its products from Chinese, and position itself as a producer complementary to China rather than competing with it. If this is done successfully, the country can form a production partnership with China and use Chinese low-cost inputs to its advantage. The crucial question is how to do this concretely. The proper positioning requires a clear understanding of the fields in which China excels and the fields in which it does not.

Since China is a big country, it is not easy to find industrial categories that are not produced by it. One needs to go into the level of individual products and even different grades of the same products, to find a niche. Even then, there is no guarantee that China will not produce that product next year. Many countries want to promote "high-tech" industries to upgrade its skills and compete with China. However, the popularity of this strategy must be evaluated against the following precautions: (i) there is a significant gap between national aspiration and actual capability; (ii) no differentiation will occur if all countries adopt this strategy; and (iii) China is also targeting such areas.

Thus, finding a niche in terms of specific products, including "high-tech" products, has certain limits. The better way to distinguish oneself is to analyze China's strengths and weaknesses from the viewpoint of business architecture, as explained below.

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[3] Two facts complicate such a study. First, the policies adopted by Taiwan and Korea were very different in that the former promoted dynamism of SMEs while the latter featured large business groups (*chaebols*) supported by large banks. Second, state-led industrialization strategy adopted by Korea, in particular, is no longer available to latecomer countries of today under the globalization pressure.

5. Integral Manufacturing

We would like to propose one concrete industrial strategy for Vietnam in order to overcome the difficulties addressed in earlier sections. The strategy is targeted at building domestic capability in assembly-type manufacturing, such as electronics and electricals, motorbikes, and automobiles, and the production of parts and components of these industries[4]. Although assembly-type manufacturing industries differ from one another in some aspects, they are common in the sense that (i) they extensively use metal, plastic and rubber parts; (ii) product quality heavily depends on the quality of these parts; (iii) they also require labor-intensive assembly with precision; and (iv) innovation and model changes are quick and frequent. For this reason, assembly-type manufacturing industries can to a large extent share the same supporting industries and human resources. That is why they should be grouped together in strategic planning.

Vietnam's workforce is particularly suited to labor-intensive assembly with precision mentioned above, and that is why such FDI inflows are accelerating in recent years. However, Vietnam must also learn and internalize the other aspects, (i) (ii) and (iv) above, to fully take advantage of the strength of assembly-type manufacturing. If this is done successfully, assembly-type manufacturing will surely become the main pillar of Vietnam's industrialization, providing jobs, improving skills, and raising national income.

Even without any further policy reform, FDI will probably continue to come to Vietnam and, given sufficient time, the country will reach the income and industrial levels of Thailand and Malaysia today. However, as argued above, these ASEAN neighbors remain heavily dependent on foreign technology and management. Despite many decades of supporting industry and SME promotion, their human resources and local parts makers remain too weak to break through the "glass ceiling" and reach the level of Taiwan or Korea. If Vietnam does not have a good policy, it is also likely to stop at the level of Thailand and Malaysia today.

Another important consideration noted earlier is that Vietnam is required to integrate much faster than ASEAN4. Thailand and Malaysia absorbed a large amount of FDI, but they were not "open" in the sense that they kept high tariffs, localization requirement, import restrictions, etc. for a long time. They used these measures for at least a few decades to develop and protect their industrial base. But Vietnam must open up now, before building such an industrial base, and face global competition. Vietnam's industrial strategy must therefore be different from and bolder than those of Thailand and Malaysia.

Let us now propose a new manufacturing strategy for Vietnam based on the above considerations.

(1) Vietnam should liberalize its trade and investment regimes unconditionally and more decisively than ASEAN4 did in the past, create the most free and low-cost business environment in East Asia, and attract a large amount of FDI without selectivity[5]. This decisive openness should be the strongest selling point in FDI marketing.

(2) Linkage between domestic firms and foreign multinationals should be promoted as a matter of highest priority. Vietnamese firms should double efforts to become suppliers

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[4] Assembly-type manufacturing has been the driving force of economic transformation of Japan, Taiwan, Korea, ASEAN4 and China, and it is also expected to play the same role in Vietnam. For other industries, such as garment, footwear, food processing, software, energy, industrial materials, construction, logistics, trade, telecom, finance, tourism, etc, other strategies must be sought since the argument in this section is not applicable to them.

[5] The only permissible reasons for rejecting FDI are environment, cultural indecency, and national security. This rule should be applied sparingly under transparent criteria.

of FDI manufacturers and foreign buyers, and improve their capabilities. The government should support their effort.

(3) Vietnam should learn the *monozukuri*[6] spirit of Japan's *integral manufacturing*, as explained below, as quickly as possible. Vietnam should aim to become a reliable developing country partner in high-quality manufacturing with Japan and other developed countries producing integral products.

Prof. Takahiro Fujimoto of Tokyo University and his research team have come up with the business architecture theory to explain the differences among the manufacturing industries of major economies such as Japan, China, the United States, Korea, Taiwan, and ASEAN countries. This theory has a significant implication for Vietnam's industrial strategy. According to Prof. Fujimoto, there are two basic architectural types in manufacturing-- modular architecture and integral architecture. In modular architecture, the modality of interaction among components is standardized for easy connection. For example, desktop computers are a typical modular product in which globally common components from various companies are freely combined. By contrast, in integral architecture, the complexity of interaction is happily accepted, and improvements are achieved through numerous trials and errors. For example, automobiles must be manufactured with integral architecture if multiple objectives such as performance, comfort, fuel efficiency, safety, etc. are to be attained simultaneously. Generally speaking, modular architecture is suitable for obtaining quick results at low cost while integral architecture is appropriate for the pursuit of ever-higher quality in the long run.

Figure 2: Modular versus Integral Manufacturing

	Modular manufacturing	**Integral manufacturing**
Parts interface	Parts are common and can be used for any model	Each product has unique parts, specifically designed
Merits	Quick results and flexibility	Endless pursuit of quality
Demerits	No differentiation, excess entry, low profit, lack of R&D	It takes much energy and time to achieve results
Institutional requirement	Openness, quick decision making, flexible outsourcing	Long-term relations, building internal skills & knowledge
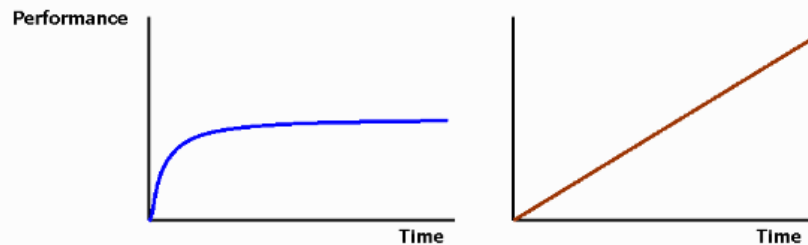
Correspondence between products and business architecture is not fixed; it evolves dynamically with the business strategy of each firm or country, technical progress, and consumer tastes. In addition, business architecture often has structural layers in which, for

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[6] *Monozukuri* literally means "making things" or "manufacturing."

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example, modularization may proceed in final assembly while integration may deepen in components.

Japan is a country of integral architecture, intensely interested in efficient factory operation and product integrity. By contrast, the United States excels in modularization and is good at slicing the supply chain of a product into appropriate elements, standardizing them and making profits by the novelty of combination. China is also a country of modular architecture, but its comparative advantage lies in labor-intensive modular products rather than knowledge-intensive modular products as in the case of the United States. Prof. Fujimoto considers China to be a country of quasi-modularity since its manufacturing features mass production of products with copied design and technology rather than original innovation.

Since the United States and China are both modular countries with different development levels, they are complementary production partners. The former can supply technology and capital while the latter can offer cheap labor to produce modular products. Meanwhile, Japan is a country of integral manufacturing with high technology, high wages and aged population looking for a developing country partner. Using cheap unskilled labor in China and ASEAN is not enough to fully exploit the potentiality of integral manufacturing. If ASEAN, the traditional destination of Japanese FDI, learns to become a manufacturing partner with long-term vision and strong aspiration for high quality, Japan and ASEAN can form a strategic alliance in manufacturing integral products which are differentiated from Chinese products. However, this alliance remains a possibility since no ASEAN country has acquired necessary skills and attitude for Japanese-style manufacturing. As noted above, Thailand and Malaysia are currently struggling to become full-fledged manufacturing countries. They still need Japanese managers and engineers to stay, and depend heavily on FDI parts producers.

Figure 3: Production Alliances Based on Business Architecture
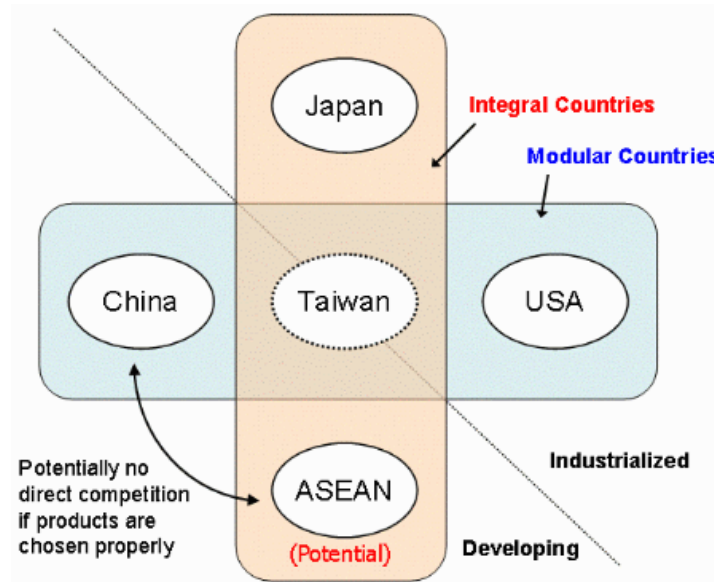
Source: Prof. Takahiro Fujimoto's explanation to the joint VDF-MOI mission in Tokyo, June 2005.

To become a partner in integral manufacturing requires ability to design and operate factories efficiently; maintain, adjust and repair machines; design parts; produce precision molds and dies; educate highly skilled industrial *Meisters*, and so on. These requirements are not new. But the point is that they must be accomplished well with purpose and tenacity. This will enable ASEAN to graduate from simple assembly by foreign orders to participation as an indispensable player in the global manufacturing network. This will also upgrade the Japan-ASEAN economic relationship to a higher level.

Among ASEAN countries, Vietnam and Thailand are top candidates for this feat. Vietnam should set a clear goal with appropriate action plans, and the Japanese government and business community should actively provide technical assistance and business cooperation for this purpose.

This perspective explains why supporting industries (especially high-quality plastic and metal processing industries) and human resource development (especially high-level production managers and engineers) are so crucial for Vietnam. They are needed to significantly raise domestic manufacturing capability, and to differentiate Vietnam from China and other ASEAN countries. It also means that copying China's manufacturing style or receiving Chinese technical assistance is not desirable for Vietnam since it only leads to low-price, low-quality competition yielding little profit, as well as a direct clash with Chinese products.

6. Anticipated Skill Shortages in Japan

Japan desperately needs a developing country partner in integral manufacturing but has found none so far. It needs such a partner since its wages are too high and its population is aging, making it very difficult to find young engineers and production managers in sufficient number and quality inside Japan. The postwar baby boomers, born in 1947-49, with high skills are reaching the retirement age soon. The 1947 babies will become 60 years old in 2007 and begin to leave factories (the "2007 problem"). Their skills must be transferred to the next generation but Japan lacks a sufficient number of successors.

According to the *White Paper on Monozukuri*[7], the number of monozukuri workers in Japanese manufacturing was 1.93 million in 2005. When asked if the "2007 problem" (retirement of skilled workers) was a serious concern, 30.5% of the manufacturing firms responded yes. Among them, main reasons for their concern included long time required for skill transfer (68.5%), lack of younger engineers with enthusiasm (64.5%), and difficulty in communication between teacher and student due to a large age or skill gap (41.9%).

Figure 4 shows the worker shortages for the ten largest basic industrial skills in Japan. As of 2005, worker shortages are not yet severe, with only 25.6% of the respondent firms reporting skill shortages in quantity or quality (or both), 47.9% reporting adequacy, and 1.7% reporting surpluses (these numbers are averages for the ten skills). However, as time progresses, skill shortages are likely to worsen. Many firms are expected to retain skilled workers beyond the retirement age, which will delay the impact of the 2007 problem for several years. But in the long run, Japan will inevitably face skill shortages unless fundamental solutions are found.

I have highlighted Japan as a principal monozukuri partner for Vietnam, since Japan is the only country in East Asia that has achieved a high level of integral manufacturing. In

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[7] Ministry of Economy, Trade and Industry; Ministry of Health, Labor and Welfare; and Ministry of Education, Culture, Sports, Science and Technology, *White Paper on Monozukuri*, 2005. Data in the text were obtained from the survey by the Ministry of Health, Labor and Welfare on enterprises with five or more regular employees.

addition, Japan is already the most important manufacturing investor in Vietnam. Moreover, if Vietnam masters integral manufacturing, it can also cooperate more effectively with, for example, German automobile producers or Italian machinery companies. That is why I sincerely hope that high aspiration for assembly-type integral manufacturing be incorporated as one of the strategic pillars of Vietnam's overall industrial master plan.

Figure 4: Shortages and Surpluses of Monozukuri Workers in Japan
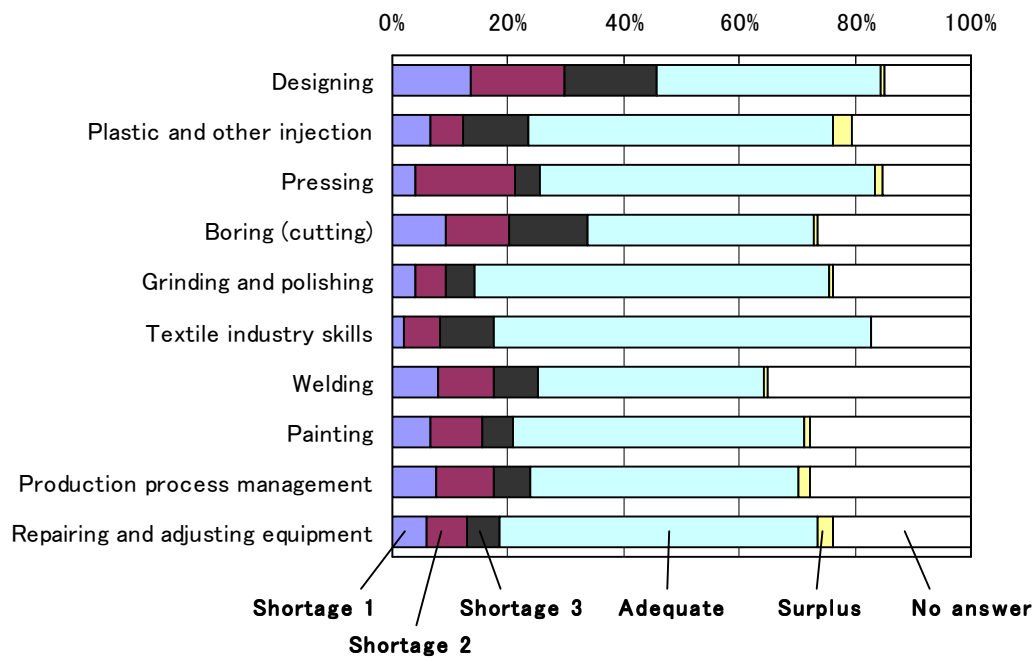
Note: These are the survey results on the ten basic industrial skills with largest numbers of workers in 2005. Shortage 1, 2 and 3 are shortage in quantity, shortage in quality, and shortage in both quantity and quality, respectively.

Source: see footnote 6.

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AFTERNOON SESSIONS
‹Paper Presentations›

SESSION 1
Economics and Business

Macroeconomic Policy Analysis of Vietnam – A Macro-Econometric Model Approach

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Abstract

Since 1986, Vietnam has been implementing its transition from centrally planned economy to a market economy and has maintained an opening-up policy. Economic reforms on both demand side and supply side have largely contributed to successes of the economy. Since 1990, the economic development has been impressive, even if Vietnam was strongly affected by the Asian financial crisis in 1997-1998. The high economic growth was achieved in a stable macroeconomic situation. Inflation was kept within a controllable range. As a consequence of its integration into the world economy and its economic reforms, Vietnam has benefited from inflows of foreign direct investment (FDI) and foreign exchange expansion. Undoubtedly, the macroeconomic policies have played an important role in stabilizing the economy in this period. However the slowdown of economic growth during the Asian crisis has raised the need for suitable adjustments in economic policies to speed up the economic development. The objective of this paper is to analyze the impacts of short-term macroeconomic policy's adjustments in Vietnam. These impacts are investigated by employed a macro-econometric model with the assumption of demand determined economy in the short term. Based on the characteristics of transition period, Vietnamese economy's model is constructed and adjustments of fiscal policy and exchange rate policy are analyzed since 1998, when Vietnamese economic growth has been slowing down. Fiscal relaxation and exchange rate devaluation are two main policies which is suggested for promoting growth in this period.

Introduction

As demand management policies, macroeconomic policies have short-run effects through the changes in aggregate demand and prices. Cook and Kirkpatrick (1990) report that the objective of macroeconomic policies is to control the short-run behavior of an economy. The behavior is monitored by the movements in the three main aggregate level variables – the output level, the inflation rate and the balance of payment. In general, for internal balance, the policies raising aggregate demand in the short term will lead to increase in the

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output and price level. For an open economy, external balance is affected by changes in domestic interest rate and exchange rate.

It has been evident that macroeconomic policies in Vietnam have contributed much to the success of the country after Renovation policy, especially over the last decade. As a result, the Vietnamese economy has made many significant achievements over more than 15 years of Renovation. In the last decade, the country enjoyed very promising economic performance. High economic growth was achieved in a stable economy and GDP doubled after 10 years.[1] Inflation has been curbed. Open door economic policy resulted in huge external financial inflows in the forms of Foreign Direct Investment (FDI) and Official Development Assistance (ODA), and strong external trade growth.

However, the slowdown in economic growth in some recent years has raised the need for suitable adjustments in economic management. In 1997-1998, the Asian economic crisis resulted in decline in exports and capital inflows of Vietnam. Domestic prices have been kept stable, but there have been some signs of stagnant domestic demand. Despite high economic growth rate gained in the last period, there is still a big gap in development level between the country and the region. For the future of Vietnamese economic development, it is necessary to keep a stable high economic growth rate.

The Vietnamese economy in transition period has been an attractive topic involving numerous studies. However quantified analysis of policies' impact on the economy has been limited. The main reason is that the transformation period from centrally planned economy to market economy has taken place for only a short period, and thus the necessary data for such study is limited. It is difficult but interesting to carry out quantitative analysis of the Vietnamese economy.

The main objective of this paper is to analyze impacts of macroeconomic policies' adjustments on the Vietnamese economy in the transition period. For the purpose of quantitative analysis, macro-econometric models can take into account macro behavioral relationships and are suitable for analyzing medium term and short term impacts of macroeconomic policies. With the given objective of study, macro-econometric modeling will be used as a method of quantitative analysis.

Data collecting for model is always difficult when applying quantitative study method for Vietnamese economy. In order to build a macro econometric model, macroeconomic time series data is collected from national account in the period 1986 to 2003. Other necessity necessary data is collect from other sources of Vietnamese government, ADB, WB and IMF.

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[1] In terms of 1994 constant price, GDP in 1990 was VND 131,968 billion and in the year 2000 was VND 273,666 billion VND.

The structure of this article is as follow: In the section 1, an introduction about the background, also the objective and methodology of the study in this paper is given. Section 2 overviews the Vietnamese economy performance and macroeconomic policies' implementation after Renovation program. Section 3 is employed to build a macro econometric model based on characteristics of the economy. Section 4 evaluates the impacts of macroeconomic policy adjustment. Two scenarios of fiscal policy relaxation and exchange rate devaluation implementation are considered. In the section 5, conclusions are drawn based on the results and suggestions for policy implications.

1. VIETNAMESE ECONOMIC PERFORMANCE AND MACROECONOMIC POLICY AFTER RENOVATION POLICY

1.1 Macroeconomic performance after renovation policy

Vietnamese economy has been in a transition period since 1986, transforming from a centrally planned economy to market economy under the "Doimoi" or "Renovation" program. Although the "Doimoi" program was initiated in 1986, only in the spring 1989 did Vietnam embark on comprehensive reform towards a market economy. The reform aimed to stabilize the economy, remove administrative controls that stifled economic performance, and induce market development. The stabilization program was adopted in 1989 as a combination of reforms. The key components of the program were tight monetary and fiscal policies and an appropriate exchange rate policy. The reform included devaluating and unifying the market exchange rates, raising nominal interest rates and thereby pushing real rates to positive levels, reducing subsidies to SOEs, curbing public sector expenditures, restraining increases in wages and state-run sector and state budget expenditures as well as halting the financing of state budget deficits by printing money. A new banking system was established to replace the old mono banking system with a two level banking system that separated the functions of management carried out by state bank from business activities of commercial banks. A new taxation system was also established in this period. A series of tax laws was promulgated including turnover tax, profit tax, export and import taxes. The new tax system contributed to the increase in fiscal revenue and macroeconomic stabilization. Price liberalization was carried out in the period 1989-1991. In the meantime, supply side related policies such as encouraging the development of a multi-ownership economy, restructuring of SOEs, decollectivizing and granting individuals and families long-term user rights to productive land in the agricultural sector were essential factors included in the reform package.

In the 1990s, particularly the first half, the economy showed very good performance. High economic growth was attained under stable macroeconomic conditions. As a result of a stabilization program, hyper inflation was curbed.

Table 1.1. Vietnam: Some Macroeconomic Indicators (1990-2003)														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
GDP growth (%)	5.1	5.8	8.7	8.1	8.8	9.5	9.3	8.2	5.8	4.8	6.8	6.9	7.0	7.2
Agriculture growth (%)	1.0	2.2	6.9	3.3	3.4	4.8	4.4	4.3	3.5	5.2	4.6	3.0	4.1	3.2
Industry growth (%)	2.3	7.7	12.8	12.6	13.4	13.6	14.5	12.6	8.3	7.7	10.1	10.4	9.4	10.3
Services growth (%)	10.2	7.4	7.6	8.6	9.6	9.8	8.8	7.1	5.1	2.3	5.3	6.1	6.5	6.6
Unemployment rate in cities (%)						5.88	5.88	6.01	6.85	6.74	6.44	6.28	6.01	5.78
CPI index (1994=100)	33.2	54.7	72.2	84.6	100.0	117.9	129.9	136.3	148.4	155.1	160.9	163.8	170.5	179.3
Inflation rate (%)	45.9	64.8	32.0	17.3	18.2	17.9	10.2	4.9	8.8	4.6	3.7	1.8	4.1	5.1
FDI (implemented) (USD. Mil.)	120	165	333	832	1048	2276	1838	2074	800	700	800	900	1100	
ODA (implemented) (USD. Mil.)						358	148	384	539	787	1123	780	1786	
Export fob (USD. Mil.)	2404	2087	2581	2985	4054	5449	7256	9185	9360	11541	14483	15029	16706	20176
Annual change (%)	23.5	-13.2	23.7	15.7	35.8	34.4	33.2	26.6	1.9	23.3	25.5	3.8	11.2	20.8
Import cif (USD. Mil)	2752	2338	2541	3924	5826	8155	11144	11592	11500	11742	15637	16218	19745	25227
Annual change (%)	7.3	-15.0	8.7	54.4	48.5	40.0	36.6	4.0	-0.8	2.1	33.2	3.7	21.7	27.8
Trade balance (USD. Mil)	-348	-251	40	-939	-1772	-2706	-3888	-2407	-2140	-201	-1154	-1189	-3039	-5051
Exchange rate (Dongs per dollar)	6483	10037	11202	10641	10966	11038	11033	11683	13268	13943	14168	14725	15280	15585
Short term interest rate (% monthly)	4.00	3.83	3.48	2.35	2.10	2.10	1.57	1.13	1.20	1.12	0.88	0.77	0.82	0.80
Deposit rate (% monthly)	4.50	3.79	2.84	1.70	1.40	1.40	0.80	0.78	0.84	0.50	0.35	0.46	0.57	0.60
Long term interest rate (% monthly)	3.50	3.38	2.71	1.50	1.41	1.70	1.58	1.23	1.25	1.18	0.85	0.82	0.85	0.82
Domestic saving (%GDP)	2.9	10.1	13.8	16.8	17.1	18.2	17.2	20.1	21.5	24.6	27.1	28.8	28.7	28.2
Domestic investment (%GDP)	12.6	15.1	17.6	24.3	25.5	27.1	28.1	28.3	29.0	27.6	29.6	31.2	33.2	35.1

Table 1.1. Vietnam: Some Macroeconomic Indicators (1990-2003) (Cont.)														
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Population (1000 pers)	66016.7	67242.4	68450.1	69644.5	70824.5	71995.5	73156.7	74306.9	75456.3	76596.7	77635.4	78685.8	79727.4	81902.4
Employment (1000 pers)	29412.3	30134.6	30856.3	31579.4	32303.4	33091	33761	34493	35233	35976	36702	37676	38715	39720
Employment by sector														
Agriculture (1000 pers)	21476.1	21907.3	22339.5	22755.5	23155.5	23534.8	23874.3	24196.4	24504.1	24791.9	25044.9	25304.9	25572.8	25840
Industry (1000 pers)	3305.7	3390.3	3473.9	3561.9	3654.6	3755.7	3887.7	4020.7	4157.1	4300.4	4445.4	4712.3	5002.5	5215
Services (1000 pers)	4630.5	4837	5042.9	5262	5493.3	5800.5	5999	6275.9	6571.8	6883.7	7211.7	7658.8	8139.7	8665
Composition of employment														
Agriculture (%)	73.0	72.7	72.4	72.1	71.7	71.1	70.7	70.1	69.5	68.9	68.2	67.2	66.1	65.1
Industry (%)	11.2	11.3	11.3	11.3	11.3	11.3	11.5	11.7	11.8	12.0	12.1	12.5	12.9	13.1
Services (%)	15.7	16.1	16.3	16.7	17.0	17.5	17.8	18.2	18.7	19.1	19.6	20.3	21.0	21.8
GDP at constant 1994 prices (Bil. VND)	131968	139634	151782	164043	178534	195568	213832	231264	244596	256269	273666	292535	313135	335821
GDP at current prices (Bil. VND)	41955	76707	110532	140258	178534	228892	272037	313624	361016	399942	441646	481295	536098	605491
Composition of GDP														
Agriculture (%)	38.7	40.5	33.9	29.9	27.4	27.2	27.8	25.8	25.8	25.4	24.5	23.2	23.0	21.8
Industry (%)	22.7	23.8	27.3	28.9	28.9	28.8	29.7	32.1	32.5	34.5	36.7	38.1	38.5	40.0
Services (%)	38.6	35.7	38.8	41.2	43.7	44.1	42.5	42.2	41.7	40.1	38.7	38.6	38.5	38.2

Source: General Statistic Office of Vietnam (GSO); Ministry of Planning and Investment, Vietnam (MPI); ADB- key indicators; and author's estimates.

1.2. Macroeconomic policy after Renovation program

As one important part of stabilization program, tight fiscal policy was adopted to constrain the budget deficit. The current expenditure of the government was curtailed to comply with the scope of fiscal revenue. Fiscal deficits dropped sharply and were tightly controlled. The financing of state budget deficits by printing money was halted and has been stopped since 1992 (Nghieu 2000:40). Borrowing to finance budget deficits has only been used for development investments emphasizing infrastructure investment. However, with the changes in economic conditions in the late 1990s when economic growth slowed down and inflation was curbed at a safe level, tight fiscal policy seemed less suitable. A more flexible policy should be considered.

Other key policy was implemented in Vietnam is tight monetary policy. Under tight monetary policy, money supply was strictly controlled. Money growth was kept in accordance with GDP growth and has been demand determined. In theory, the State Bank of Vietnam (SBV) could use some monetary policy tools such as interest rates, credit ceilings, reserve requirements, recapitalization, and Treasury Bill auction to control money supply. However, in reality, the money supply in Vietnam has been controlled mainly by the credit ceiling imposed for every commercial bank from 1994 (Thanh 2003:4). In fact, indirect tools did not work well under the less-developed financial system existing in Vietnam thus the SBV controlled the money supply under a direct mechanism rather than using indirect monetary policy tools like many other market economies. The increase in nominal interest rate and then a positive real rate aiming to stopping credit subsidies contributed greatly in curbing inflation. For a long time, interest rates had been controlled by SBV. The ceiling lending rates and then the basic lending rates with upper bounds were set by SBV. The lending rate ceiling on foreign currency loans was abolished in November 2001. Since then domestic borrowers in foreign currencies have been allowed to negotiate interest rates with domestic and foreign banks. Only after June 2002, were interest rates fully liberalized. Banks are now allowed to set lending rates on the basis of their own appraisal and negotiation with their customers.

Exchange rate policy was also considered as a main part of stabilization policy in Vietnam. In 1989 when Vietnam embarked on radical reform toward a market economy, the exchange rate was unified by a sharp devaluation of the official exchange rate. During the 1990s, the VND was kept stable with several discrete realignments. The attempts of SBV to keep exchange rate stable in this period had the primary purpose of stabilizing domestic prices while the economy was substantially dependence on imports. However, in this period, VND was considered overvalued and was under devaluation pressure. During the period 1997-1999, pressures to devalue the VND increased as financing current account deficits became more difficult due to a slowdown in foreign direct investment (FDI), thin foreign currency reserves with a concurrent decline in growth of exports. Worries about overvaluation of VND became more acute following the East Asian economic crisis that led to sharp devaluation of crisis countries' currencies, and thus reduced the competitiveness of Vietnamese commodities. Under pressure to devaluation with an accompanying fear of bad outcomes of a sharp devaluation under the introduction of a flexible regime, the SBV has adopted a cautious exchange rate policy,

which has allowed the VND to devalue modestly and gradually, while keeping strict control over foreign exchange. Vietnam has also imposed stronger controls over imports and current account transactions. Between 1997 to 2000, the VND depreciated by at least 20% with respect to the USD, but appreciated by at least 19% or more relative to currencies of crisis-affected ASEAN countries (CIEM 2001:35). A further devaluation is necessary in consideration of future export prospects.

Since 1998, Vietnamese economy growth was slowing down after a period of high economic growth rate. The regional situation after the Asian crisis and the country economic conditions has changed and it requires appropriate adjustments in macroeconomic policy.

2. A MACRO-ECONOMETRIC MODEL FOR VIETNAM

The main objective of this study is to analyze impacts of macroeconomic policy adjustment on the economy by applying a econometric model as a quantitative method.

The model will describe the behavior of aggregated agents. In practice such a model generally considers five agents: the households, the firms, the financial institutions, the State and its agencies, and the rest of the world. The model is supposed to describe the behavior of agents, but this behavior is not decided by theory alone. Formulas will be based on historical data, and validated through statistical tests. The estimated formulations have been defined in advance, according to some theory. The role of econometrics will be only to validate pre-set structural equations, and to lead the choice between alternate versions. The parameters of the equations are empirically estimated based on time series data. The model is a dynamic one. It means that in some cases, the past values of variables will affect present ones. This is a general characteristic of macro-econometric models.

This section introduces the data sources for the model and methodology used in modeling.

2.1. Data system and software used in model
Before 1988, Material Product System (MPS) was used as a System of General Socio-economic Information in Vietnam. From 1989 to 1992, under the support of International Statistical Agency, Vietnam's General Statistical Office started studying to apply System of National Accounts (SNA). The government Decree No 183/TTg on the official application of SNA to periodically compile the country's national accounts was promulgated in December 25, 1992 by the Prime Minister. After several years applying SNA in Vietnam, GSO has calculated some aggregate indicators and compiled some main accounts for the demand of macroeconomic management. However, the application of SNA in Vietnam has been inefficient. The reasons are that the initial basic data is not adequate and the accounting and statistical system are not improved enough to correspond with the contents of SNA. Thus, to a certain extent, Vietnamese data is inaccurate and inadequate (General Statistics Office 1998).

The model uses annual data, and the equations are generally estimated for a period ranging between 1986 and 2003, that is, the period of the dramatic transformation and the opening up of the Vietnamese economy. Almost all data comes from the Statistical Yearbook of Vietnam and reports of International organization (such as ADB, IMF,WB); some other data come from the Ministry of Planning and Investment (MPI), Vietnam, and Development Strategy Institute (DSI), Vietnam.

The software used to construct and run the model is EVIEWS 4.0.

2.2. Method of estimation

A model is a set of one or more equations that jointly describe the relationship between a set of variables. The model equations can come from many sources: they can be simple identities, they can be the result of estimation of single equations, or they can be the result of estimation using any one of multiple equation estimators. There are two approaches to estimate the model equations. One approach is to estimate each equation in the system separately. A second approach is to estimate, simultaneously, the complete set of parameters of the equations in the system. In reality, single equation estimation method is easier and more flexible for adjusting and selecting the form of equation[2]. There are some advanced technique to estimate system of equations such as Two Stage Least Squares (TSLS) or Three Stage Least Squares (3SLS) [3], however with Vietnamese data condition, the observations are limited [4] and it is ineffective for using some techniques such kind of techniques.[5] An alternative technique is used for this model estimation is the Seemingly Unrelated Model (SUR). The SUR model is a recursive model consisting of a series of endogenous variable as a group. This kind of model can improve on the efficiency of ordinary least squares. By writing the equation system as one combined equation, estimating that equation using least squares estimation. This increase the efficiency because there are more degree of freedom with which to estimate the parameters for variables than single one[6].

Thus the Vietnamese model, ordinary least squares (OLS) method is applied to estimate the single equations to identify the form of each equation. And than SUR model is applied for estimating system of equations.

A common finding in time series regressions is that the residuals are correlated with their own lagged values. This serial correlation violates the standard assumption of regression theory that disturbances are not correlated with other disturbances.

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[2] If one of the equations in the system is misspecified and estimate the parameters using single equation methods, only the misspecified equation will be poorly estimated. If system estimation techniques are employed, the poor estimates for the misspecification equation may "contaminate" estimates for other equations.
[3] For further discussion see Griffiths, Hill and Judge 1993.
[4] Series data is form 1986 to 2003
[5] Requirement for the effectiveness when using TSLS or some other methods is that the observations are rather big
[6] For further discussion see Pindyck and Rubinfeld 1991:308-311.

In this case we could apply auto regressive model to correct the serial correlation error. The simplest and most widely used model of serial correlation is the first-order autoregressive, or AR(1), model. For the simple case, if the AR(1) model is specified as

$$Y_t = \beta X_t + U_t \quad (1)$$

$$U_t = \rho U_{t-1} + \varepsilon_t \quad (2)$$

The parameter ρ is the first-order serial correlation coefficient. In effect, the AR(1) model incorporates the residual from the past observation into the regression model for the current observation. For example, if EVIEWS software is used to estimate, the linear model is transformed into nonlinear model as

$$Y_t = \rho Y_{t-1} + \beta (X_t - \rho X_{t-1}) + \varepsilon_t$$

by substituting the second equation into the first, and rearranging terms. The coefficients ρ and β are estimated simultaneously.

EVIEWS software provides the DW test, the Q-statistic and the Breusch-Godfrey LM test to test the serial correlation[7].

2.3. Model Specification

The model is a simple macro-econometric one with the assumption of demand determined economy in the short term, implying that increase in aggregate demand leads to increase in output and prices.[8] Output (GDPR) of the economy is determined by domestic demand (DR) and corrected by trade balance (TB). Domestic demand (DR) is determined as sum of total investment (IR), private (CPR) and government consumption (CGR). Private consumption is determined by disposable income (DIR). Disposable income is determined as income (GDPR) after tax. Because of lack of data on tax, government revenue from tax (REVGR) is used as proxy for tax. Total investment (IR) includes foreign direct investment (FDIR), domestic investment from firms (IFRD) and government investment (IGR). Domestic investment from firm (IFRD) is explained by income (GDPR), real short run loaning interest rate (SRR), and government investment (IGR). Real short run interest rate is determined by nominal interest rate (SR) after adjustment for inflation rate (P). Inflation rate is determined by changes in domestic price, here GDP deflator (PGDP) is used as domestic price. Domestic price (PGDP) is affected by change in aggregate demand in short term (DR)[9] and import deflator as domestic price of import (PM)[10]. Import deflator is determined by nominal exchange rate (ER) and

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[7] For details see EVIEWs user's guide book or EVIEW help.
[8] Change in demand in short run will move the economy along the short run aggregate supply curve, which slopes upward in short run, thus changing the output level, employment and price level.
[9] In short term, the expansion of aggregate demand will lead to change in price and output. The increase in price leads to inflation. This effect is considered as demand pull inflation. For further discussion, see Mankiw 2000:363-364.
[10] For a strongly import-dependent economy like Vietnam, change in import price leads to change in domestic price. This effect is considered as cost push inflation.

trading price of import (PM$). Trade balance is determined by net export (XR-MR). Export (XR) is explained by world demand (WD) [11] and price-competitiveness determined by nominal exchange rate, domestic price (PGDP) and trading price of exports (PX$). Import is explained by domestic demand (DR), export [12], and price-competitiveness. Real money demand is determined by real income. Money growth is assumed to be demand determined. Employment of the economy is determined by real output (GDPR).

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[11] Definition of World demand corresponds to the share normally allocated to Vietnamese exporters, considering the evolution of demand on the world market by normal clients of Vietnam (including major trading partners of Vietnam such as US, Japan, China, Australia, Singapore, Germany, UK, Taiwan, France, Korea, Philippines, Holland, Malaysia, Belgium, Hong Kong, Thailand, Indonesia) for the goods which Vietnam exports.

$$WD = \sum_{i=1}^{n} GGDP_i \times W_i$$

GGDP(i): Income growth of trading partner i
X(i): trade weight of trading partner i

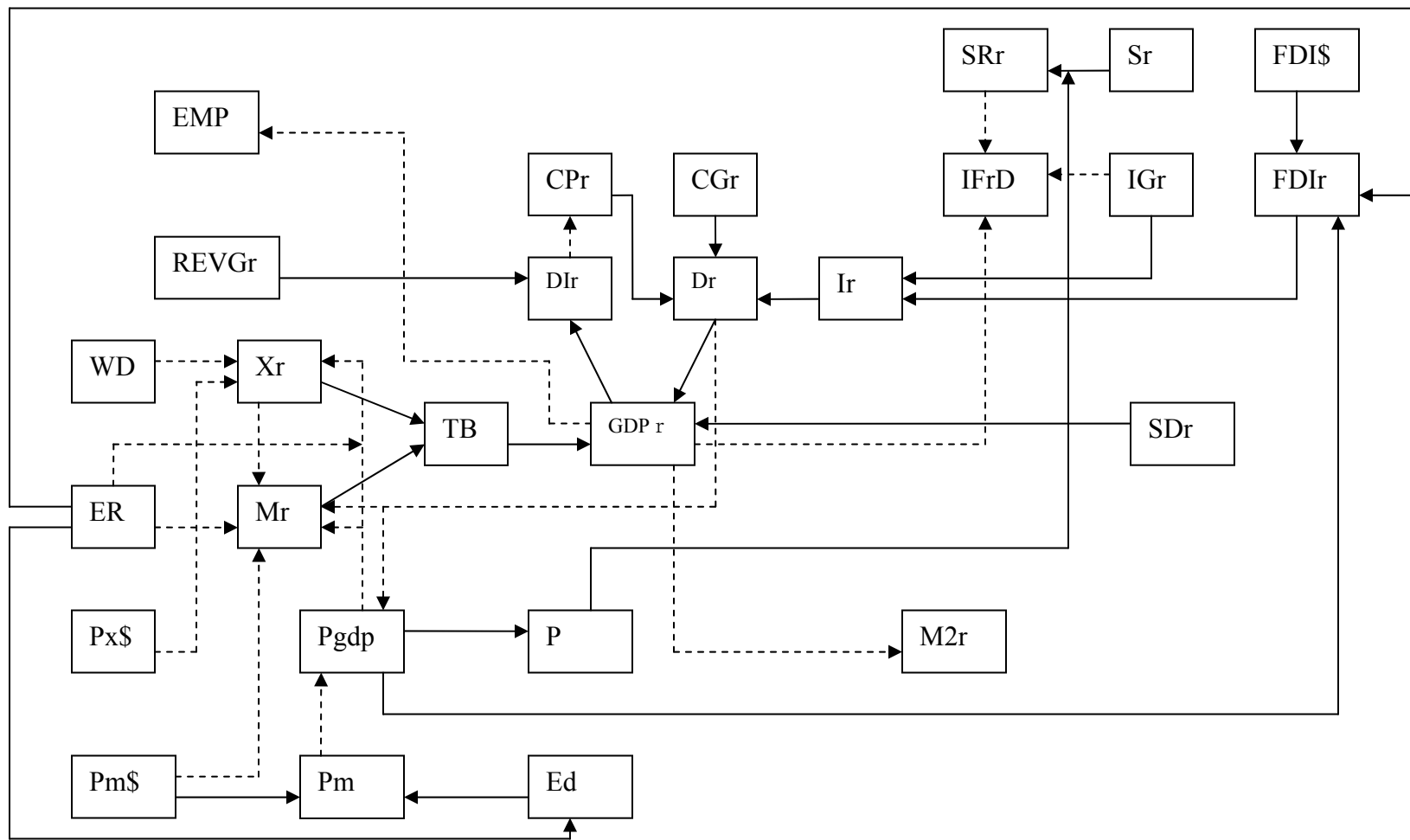[12] Part of imports are intermediate goods or materials used for exports.

Figure 2.1. Vietnam Macroeconomic Model Structure

Behavior Equations

(1). Private Consumption Equation

Real consumption (CPR) is simply defined as the function of real disposable income (DIR). Serial correlation is determined by using DW test.[13] Autoregressive (AR) model is applied to correct serial correlation.

Log(CPR)= 3.01+0.74*log(DIR)+[AR(1)= 0.903, AR(2)= -0.41]

Table 2.1. Estimation Result of Private Consumption Function

Dependent Variable: LOG(CPR)
Method: Least Squares
Sample(adjusted): 1988 2003
Included observations: 16 after adjusting endpoints
Convergence achieved after 5 iterations
LOG(CPR)=C(1)+C(2)*LOG(DIR)+[AR(1)=C(3),AR(2)= C(4)]

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	3.012369	0.301865	9.979183	0.0000
C(2)	0.738616	0.024964	29.58752	0.0000
C(3)	0.903265	0.236561	3.818322	0.0024
C(4)	-0.418865	0.239089	-1.751924	0.1053
R-squared	0.996886	Mean dependent var		11.90730
Adjusted R-squared	0.996108	S.D. dependent var		0.236052
S.E. of regression	0.014726	Akaike info criterion		-5.386025
Sum squared resid	0.002602	Schwarz criterion		-5.192878
Log likelihood	47.08820	Durbin-Watson stat		2.166292
Inverted AR Roots	.45+.46i		.45 -.46i	

The result of estimation shows that the coefficients conform well to theory. c(2) is positive and statistically significant at the 5 percent level, verifying a positive relationship between consumption and disposable income. The coefficient c(2)=0.74 means there will be 0.74% increase in consumption if there is 1% increase in disposable income.

(2). Domestic Investment From Firms Equation

Real domestic investment from firms (IFRD) is specified as the function of domestic real short-run interest rate (SRR), real income (GDPR) and government investment (IGR).

LOG(IFRD)=-7.07 - 0.004*SRR + 1.2*log(GDPR)+ 0.3*log(IGR)

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[13] According to the test, Durbin-Watson statistic is 0.666431, below 2, implying that there is serial correlation in the equation.

Table 2.2. Estimation Result of Private Investment Function

Dependent Variable: LOG(IFRD)
Method: Least Squares
Sample(adjusted): 1987 2003
Included observations: 17 after adjusting endpoints
LOG(IFRD)=C(1)+C(2)*(SRR)+C(3)*LOG(GDPR) +C(4)*LOG(IGR)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-7.076144	4.660618	-1.518284	0.1529
C(2)	-0.003973	0.001288	-3.085998	0.0087
C(3)	1.237718	0.559026	2.214061	0.0453
C(4)	0.300487	0.263691	1.139544	0.2750
R-squared	0.979358	Mean dependent var		10.47905
Adjusted R-squared	0.974595	S.D. dependent var		0.619376
S.E. of regression	0.098722	Akaike info criterion		-1.590688
Sum squared resid	0.126699	Schwarz criterion		-1.394638
Log likelihood	17.52085	Durbin-Watson stat		2.145583

The specification of the domestic investment from firms function is relatively simple. However, it seems to provide a reasonably good explanation of investment behavior in Vietnam. Real short-run interest rate negatively relates to domestic investment from firms as expected and is significant at 1 percent level. However, Vietnamese investment is quite interest-inelastic, with the interest elasticity estimated to be about -0.004. This is due to the fact that for a long time, the interest rate in Vietnam was tightly controlled by the State Bank.[14] Real income elasticity to investment is 1.2 and significant, implies that 1 percent increase in real income leads to 1.2 percent increase in real domestic investment from firms. One interesting result is that government investment could influence the private investment from firms as crowding in effect. Increased government investment, for example in infrastructure acts as to some extent a catalyst to private investment. The government investment elasticity is estimated to be 0.3%, meaning that 1 percent increase in government investment leads to 0.3% increase in private investment.

(3). Real Exports Equation

Exports are assumed to be a function of the price-competitiveness (ER*PX$/PGDP**)** and the world demand (WD), with positive coefficients for both variables. The exports equation may therefore be expressed as:

LOG(XR)= -8.27+ 2.46*LOG(WD)+ 0.87*LOG(ER*PX$/PGDP)

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[14] Until 2002, the interest rate was controlled by SBV. The SBV set the ceiling lending rates and then the base lending rates with upper bound for commercial banks.

Table 2.3. Estimation Result of Real Export Function

Dependent Variable: LOG(XR)
Method: Least Squares
Sample(adjusted): 1987 2003
Included observations: 17 after adjusting endpoints
LOG(XR)=C(1)+C(2)*LOG(WD)+C(3)*LOG(ER*PX$/PGDP)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-8.278408	3.184326	-2.599736	0.0210
C(2)	2.458018	0.149501	16.44151	0.0000
C(3)	0.869123	0.361072	2.407063	0.0305
R-squared	0.960613	Mean dependent var		11.05249
Adjusted R-squared	0.954986	S.D. dependent var		0.909209
S.E. of regression	0.192903	Akaike info criterion		-0.294477
Sum squared resid	0.520960	Schwarz criterion		-0.147439
Log likelihood	5.503052	Durbin-Watson stat		1.720234

All coefficients in the estimation export function bear the expected signs and are significant. As a small country, world demand has a big impact on Vietnam's export, reflected by the elasticity of world demand much larger than unity, 2.46. Elasticity of price-competitiveness is 0.87, implies significant export response to relative price changes.

(4). Real Imports Equation

Real imports are conventionally related negatively to price-competitiveness (ER*PM$/PGDP) and positively to real domestic demand. In reality, imports in Vietnam is not only for domestic demand but are also used for re-export as intermediate goods. Thus export is included in the import function as a explanation variable. The form of imports equation as

LOG(MR)=-3.85+ 0.96*LOG(DR)+ 0.43*LOG(XR)-0.14*LOG(ER*PM$/PGDP)

In the export equation the estimated coefficients also bear the right sign and are all significant at conventional levels. Domestic demand elasticity is rather high, 0.96, implies that Vietnamese economy depends heavily on imports. 1% increase in domestic demand will lead to 0.96% increase in imports. Exports elasticity is 0.43, implying that 1% increase in exports is responded by 0.43% imports. Demand for imports response to relative price change is not so significant. 1% change in relative price leads to 0.14% change in imports.

Table 2.4. Estimation Result of Real Imports Function

Dependent Variable: LOG(MR)
Method: Least Squares
Sample: 1986 2003
Included observations: 18
LOG(MR)=C(1)+C(2)*LOG(DR)+C(3)*LOG(XR)+C(4) *LOG(ER*PM$/PGDP)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-3.852497	1.431353	-2.691508	0.0175
C(2)	0.957276	0.096834	9.885781	0.0000
C(3)	0.425392	0.038900	10.93550	0.0000
C(4)	-0.135214	0.083816	-1.613220	0.1290
R-squared	0.998794	Mean dependent var		11.25242
Adjusted R-squared	0.998536	S.D. dependent var		0.732698
S.E. of regression	0.028039	Akaike info criterion		-4.117324
Sum squared resid	0.011006	Schwarz criterion		-3.919464
Log likelihood	41.05592	Durbin-Watson stat		1.631280

(5). Real money demand equation

Keynes visualized the demand for money (real cash balances) as rising from transactions, speculative and precautionary motives. For the transaction and precautionary purposes, the higher income, the higher demand for money. For speculative purposes, the higher interest rate, the less demand for money (Jha 2003:30). In fact, the strongest motive influencing the demand for money in Vietnam is transactions, which depend on income. The speculative demand for money is not very pronounced in Vietnam since the money market is not well developed and few alternative financial assets exit. Government bonds and Treasury bills are largely purchased by the financial institutions as investment for their idle funds. Thus the money demand in Vietnam is assumed as a function of income. Lagged dependent variable is included in the equation to analyze adjustment between short term and long term. The equation is defined as

LOG(M2R)= -3.545782+ 0.450740*LOG(GDPR)+ 0.833869 *LOG(M2R(-1))

The real income elasticity to money demand is 0.45 in short term, implying 1 percent change in income lead to 0.45 percent change in demand for money. Long run elasticity is much higher, about 2.7 percent.

Table 2.5. Estimation result of Real Money Demand Function

Dependent Variable: LOG(M2R)
Method: Least Squares
Sample(adjusted): 1987 2003
Included observations: 17 after adjusting endpoints
LOG(M2R)=C(1)+C(2)*LOG(GDPR)+C(3)*LOG(M2R(-1))

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-3.545782	2.260778	-1.568390	0.1391
C(2)	0.450740	0.313596	1.437329	0.1726
C(3)	0.833869	0.158339	5.266354	0.0001
R-squared	0.968564	Mean dependent var		10.96393
Adjusted R-squared	0.964073	S.D. dependent var		0.758041
S.E. of regression	0.143683	Akaike info criterion		-0.883629
Sum squared resid	0.289027	Schwarz criterion		-0.736591
Log likelihood	10.51085	Durbin-Watson stat		1.515932

(6). GDP deflator equation

GDP deflator can be understood as the general price level. For Vietnamese economy in the transition period, the two main factors assumed to have the impact on change in price level are import price, considered as cost push inflation, and aggregate demand change (DR) in the short term considered as demand pull inflation. It is useful to examine the effect of demand expansion policy on price level. The equation is defined as:
LOG(PGDP)= -3.123766+ 0.888774*LOG(PM)+ 0.255658*LOG(DR)

Table 2.6. Estimation Result of GDP Deflator Function

Dependent Variable: LOG(PGDP)
Method: Least Squares
Sample: 1986 2003
Included observations: 18
LOG(PGDP)=C(1)+C(2)*LOG(PM)+C(3)*LOG(DR)

	Coefficient	Std. Error	t-Statistic	Prob.
C_PGDP(1)	-3.352237	1.015591	-3.300774	0.0049
C_PGDP(2)	0.890023	0.016685	53.34398	0.0000
C_PGDP(3)	0.272739	0.082405	3.309723	0.0048
R-squared	0.998013	Mean dependent var		-0.611492
Adjusted R-squared	0.997749	S.D. dependent var		1.604323
S.E. of regression	0.076124	Akaike info criterion		-2.161893
Sum squared resid	0.086923	Schwarz criterion		-2.013498
Log likelihood	22.45704	Durbin-Watson stat		1.919235

The result of the equation are significant and of the expected sign. Price of import has strong impact on domestic price. 1 percent change in price of imports leads to 0.89 percent change in price level. The elasticity of total demand is 0.27, implies that 1 percent change in income leads to 0.27 percent change in price level.

(7). Employment Equation

For the employment function, demand for employment will be determined by aggregate demand. Increase in aggregate demand in short run could create more jobs. This idea combine with the idea of demand pull inflation discussed in equation (6) show the determination of output, labor and price level in the short term. Output expansion leads to the increase not only in employment but also in price level, implies the trade off between unemployment rate and inflation rate.[15] Serial correlation is determined by using DW test.[16] Autoregressive (AR) model is applied to correct serial correlation.

LOG(EMP)= 6.661686+ 0.307777 *LOG(GDPR)+[AR(1)= 0.458776]

Table 2.7. Estimation Result of Demand for Employment Function

Dependent Variable: LOG(EMP)
Method: Least Squares
Sample(adjusted): 1987 2003
Included observations: 17 after adjusting endpoints
Convergence achieved after 4 iterations
LOG(EMP)=C(1)+C(2)*LOG(GDPR)+[AR(1)=C(3)]

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	6.661686	0.116088	57.38462	0.0000
C(2)	0.307777	0.009492	32.42479	0.0000
C(3)	0.458776	0.244922	1.873154	0.0821
R-squared	0.996012	Mean dependent var		10.40613
Adjusted R-squared	0.995442	S.D. dependent var		0.110432
S.E. of regression	0.007455	Akaike info criterion		-6.800976
Sum squared resid	0.000778	Schwarz criterion		-6.653938
Log likelihood	60.80830	Durbin-Watson stat		1.735337
Inverted AR Roots	.46			

Result of estimation implies that for 1% increase in output there is for 0.3 percent increase in employment.
By applying SUR model to test for the efficient of OLS, the result of two methods is very close and the estimation of OLS method can be accepted for the model.

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[15] The idea reflects Phillip's curve.
[16] According to the test, Durbin-Watson statistic is 0.979834, below 2, implying that there is serial correlation in the equation.

Table 2.8. Result of applying SUR model

	Coefficient	Std. Error	t-Statistic	Prob.
Estimation Method: Seemingly Unrelated Regression				
Sample: 1986 2003				
Included observations: 18				
Total system (unbalanced) observations 120				
Iterate coefficients after one-step weighting matrix				
Convergence achieved after: 1 weight matrix, 9 total coef iterations				
Consumption				
C_CPR(1)	2.901921	0.183462	15.81757	0.0000
C_CPR(2)	0.747667	0.015232	49.08558	0.0000
C_CPR(3)	0.641477	0.147362	4.353070	0.0000
C_CPR(4)	-0.296180	0.147318	-2.010481	0.0472
Investment				
C_IFRD(1)	-7.113727	3.499958	-2.032518	0.0449
C_IFRD(2)	-0.004705	0.000976	-4.818946	0.0000
C_IFRD(3)	1.234334	0.418772	2.947511	0.0040
C_IFRD(4)	0.310105	0.197317	1.571607	0.1193
Export				
C_XR(1)	-8.905378	1.942122	-4.585385	0.0000
C_XR(2)	2.482339	0.129318	19.19561	0.0000
C_XR(3)	0.923995	0.221594	4.169771	0.0001
Import				
C_MR(1)	-4.287166	1.122918	-3.817881	0.0002
C_MR(2)	0.980079	0.076449	12.82002	0.0000
C_MR(3)	0.415072	0.030532	13.59462	0.0000
C_MR(4)	-0.106132	0.066430	-1.597646	0.1134
Money Demand				
C_M2R(1)	-2.325051	1.465072	-1.586987	0.1158
C_M2R(2)	0.295212	0.178702	1.651981	0.1018
C_M2R(3)	0.896829	0.082706	10.84355	0.0000
GDP deflator				
C_PGDP(1)	-3.473885	0.839998	-4.135587	0.0001
C_PGDP(2)	0.890341	0.011793	75.49757	0.0000
C_PGDP(3)	0.282467	0.068226	4.140165	0.0001
Labor Demand				
C_EMP(1)	6.648014	0.150151	44.27548	0.0000
C_EMP(2)	0.309008	0.012223	25.28034	0.0000
C_EMP(3)	0.644643	0.141861	4.544201	0.0000

Model system: the model includes 7 behaviors equations and 10 identities

(1). Private consumption equation

Log(CPR)= 3.01+0.74*log(DIR)+[AR(1)= 0.903, AR(2)= -0.41]

(2). Domestic Firm Investment Equation

LOG(IFRD)=-7.07 - 0.004*SRR + 1.2*log(GDPR)+ 0.3*log(IGR)

(3). Real Exports Equation

LOG(XR)= -8.27+ 2.46*LOG(WD)+ 0.87*LOG(ER*PX$/PGDP)

(4). Real Imports Equation

LOG(MR)=-3.85+ 0.96*LOG(DR)+ 0.43*LOG(XR)-0.14*LOG(ER*PM$/PGDP)

(5). Real money demand equation

LOG(M2R)= -3.545782+ 0.450740*LOG(GDPR)+ 0.833869 *LOG(M2R(-1))

(6). GDP deflator equation

LOG(PGDP)= -3.123766+ 0.888774*LOG(PM)+ 0.255658*LOG(DR)

(7). Employment equation

LOG(EMP)= 6.661686+ 0.307777 *LOG(GDPR)+[AR(1)= 0.458776]

(8). Real GDP includes domestic demand and trade balance and corrected by statistical discrepancy

GDPR=DR+TB-SDR

(9). Real domestic demand includes total investment and consumption

DR=IR+CPR+CGR

(10). Real total investment includes foreign direct investment, government investment and domestic investment from firms

IR=FDIR+IGR+IFRD

(11). Foreign direct investment in constant price

FDIR=(FDI$*ER/PGDP)/1000

(12). Real disposable income

DIR=GDPR-REVGR

(13). Real trade balance

TB=XR-MR

(14). Inflation rate

P=(PGDP/PGDP(-1) – 1)*100

(15). Real short run loaning interest rate

SRR=SR - P

(16). Import deflator

PM=ED*PM$

(17). Exchange rate index

ED=ER/10965.7[17]

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[17] Benchmark year exchange rate in 1994

Table 2.9. Model evaluation

	CPR	EMP	GDPR	IFRD	M2R	MR	PGDP	PM	XR
				Percentage error					
1998	0.63	-0.6	0.22	0.16	1.18	0.40	0.12	-2E-05	-0.11
1999	0.58	-0.42	0.22	0.46	1.09	0.43	0.13	-3E-05	-0.11
2000	-1.42	-0.33	-0.44	-0.62	0.71	-0.94	-0.29	2E-05	0.25
2001	-2.46	-0.39	-0.63	-0.79	0.31	-1.55	-0.47	3E-05	0.41
2002	-2.05	-0.09	-0.48	-0.46	0.04	-1.24	-0.38	2E-05	0.33
2003	0.38	0.38	0.11	0.42	0.08	0.31	0.09	-2E-05	-0.08
RMSPE	1E-02	8E-04	8E-04	1E-03	3E-03	4E-03	4E-04	3E-12	3E-04

Results of simulation for the past, in the period 1998-2003, are acceptable. The percentage errors of some indicators is from -2% to 1.158%. Root mean squared percentage error (RMSPE)[18] of indicators are very small. The model could be used to do simulations for the period of 1998-2003. Next section is use for policy simulation.

3. ASSESSMENT OF THE POLICIES' ADJUSTMENT

After the East Asian economic crisis, the Vietnamese economy slowed down. The VND was considered overvalued and appreciated relative to currencies of crisis-affected ASEAN countries, thus reducing the competitiveness of Vietnam commodities. Tight fiscal policy was no longer appropriate to promote growth. Some adjustments in macro policy were now needed. In this part, two simulations have been implemented to assess the impact of policy adjustment on Vietnamese economy in the period 1998-2003. The first one assumes a permanent increase in government investment. The second one studies the effect of nominal exchange rate devaluation. With these two simulations, the main channels through which the impact of policy adjustment on Vietnamese economy will be determined.

3.1. The impact of fiscal relaxation, government investment increase by 5%
The first simulation implemented corresponds to a permanent 5% increase in government investment. Table 3.1 presents the results of the simulations for the main variables relative to their baseline values.

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[18] RMSPE $= 100 \times \sqrt{\dfrac{1}{n} \sum_{t=1}^{n} \left(\dfrac{\hat{y} - y}{y} \right)^2}$

An increase in government investment has two implications. First, it directly raises the total demand. Second, it influences private investment. 5% increase in government investment leads to about 0.31% increase in output and about 1.88% increase in domestic investment from firms. More jobs are created; employment increases by 0.1%. Domestic prices rise by 0.2%. However, increase in government investment worsens the trade balance. Domestic price increases makes the Vietnamese commodities less competitive, thus exports reduces by 0.18%. Increase in domestic demand and domestic prices lead to 0.67% increase in imports.

Table 3.1. The Effect of 5% Increase in Government Investment

(percentage change from base)

	IGR	GDPR	IFRD	CPR	PGDP	M2R	EMP	XR	MR	TB
1998	5.00	0.40	2.01	0.36	0.22	0.30	0.12	-0.19	0.72	-5.67
1999	5.00	0.36	1.92	0.31	0.21	0.41	0.11	-0.19	0.70	-9.73
2000	5.00	0.34	1.90	0.29	0.22	0.49	0.10	-0.19	0.71	-11.61
2001	5.00	0.27	1.82	0.24	0.20	0.53	0.08	-0.18	0.66	-9.94
2002	5.00	0.26	1.80	0.23	0.20	0.56	0.08	-0.17	0.66	-8.09
2003	5.00	0.23	1.77	0.20	0.20	0.57	0.07	-0.18	0.67	-6.50
Average	5	0.31	1.88	0.27	0.20	0.43	0.10	-0.18	0.67	-8.14

The first conclusion for this simulation is that an increase in government investment could promote growth by increasing demand of the economy; however, it worsens the trade balance and leads to an increase in domestic prices.

3.2. The effect of devaluation

The second simulation concerns the nominal exchange rate. Competitiveness for domestic commodities could be gain by devaluing the domestic currency. Table 3.2 investigates the effects of 5 percent devaluation of the VND.

The simulated effect of a devaluation are quite interesting. Undoubtedly, a devaluation has a significant effect on output. Five percent devaluation would increase real GDP by a 0.27 percent. However, as import prices and domestic demand enter to determine domestic prices, the increase in nominal exchange rate implied by a devaluation leads to an increase in domestic prices. This would lead to a 4.51 % increase in the domestic price level.

Table 3.2. The effect of 5 % devaluation of the VND

(percentage change from base)

	ER	GDPR	IFRD	CPR	PGDP	PM	M2R	EMP	XR	MR	TB	ERR
1998	5	0.25	0.24	0.22	4.50	0.32	0.08	0.42	0.31	0.25	0.48	0.25
1999	5	0.27	0.34	0.24	4.51	0.39	0.08	0.41	0.34	0.32	0.47	0.27
2000	5	0.27	0.34	0.24	4.51	0.45	0.08	0.41	0.35	0.43	0.47	0.27
2001	5	0.28	0.34	0.24	4.51	0.50	0.08	0.41	0.35	0.31	0.47	0.28
2002	5	0.27	0.34	0.24	4.51	0.54	0.08	0.41	0.35	0.19	0.47	0.27
2003	5	0.27	0.33	0.23	4.51	0.57	0.08	0.41	0.35	0.09	0.47	0.27
AVER	5.0	0.27	0.32	0.23	4.51	0.46	0.08	0.41	0.34	0.26	0.47	0.27

The effect on trade is positive. Export increases by 0.34%. Import also increases by 0.26% as a result of increase in domestic demand. However increase in export is larger than in import; thus balance of trade is still improved by an increase of 0.47%. Because of inflationary effect of devaluation, 5% depreciation in nominal exchange rate leads to only 0.27% depreciation in real exchange rate.

3.3. Model limitations

The model presented in this paper emphasises the role of macro policies in the Vietnamese transitional economy. The model describes the behavior of aggregated agents mostly on the demand side of the economy. It gives a central role to macro policy as a way to promote growth in the short run. However there are still several limitations. Lack of accurate and adequate data is always the most difficult issues for quantitative studies of Vietnamese economy, and thus the model constructed in this study specified as the simple one. The model only focuses on the demand side of the economy and is not able to analyze the impact on supply side. Lack of data in banking and financial sector limits the ability of the model in analyzing impacts monetary policy in this study.

4. CONCLUSION

Since 1986, Vietnam has been in the transition from the centrally planned economy to a market economy. "Renovation" policy, or the Vietnamese "Doimoi" battle-cry moved the economic system towards major policy changes and economic reforms. In the late 1980s, Vietnam embarked on comprehensive reform towards a market economy. The reform aimed to stabilize the economy, remove administrative controls that stifled economic performance, and develop the markets. As the combination, the stabilization program adopted by the Vietnamese government in 1989 included three key macroeconomic policies which played an important role in stabilizing the economy. Tight fiscal policy and fiscal reform were implemented for the purpose of improving fiscal stance. Tight monetary policy and banking system reform were adopted as a measure to control money growth and establish the prerequisite fundamentals for market economy. Trade reform and an appropriate exchange rate adjustment were undertaken, on the one hand to promote trade relationships, on the other hand to stabilize domestic prices. macroeconomic policies in Vietnam have contributed much to the success of the country

after Renovation policy, especially over the last decade. However, the slowdown in economic growth in some recent years has raised the need for suitable adjustments in economic management.

Relaxing fiscal policy and devaluation of VND are suggested as two promoting growth policies. The simulation results show that relaxing fiscal policy implying a modesty increase in government investment could promote growth by increasing demand of the economy; however, it worsens the trade balance and leads to an increase in domestic prices. Devaluation of VND could both promote growth and improve trade by raising the competitiveness of domestic commodities. The domestic price also increase by nearly the level of devaluation.

Under the conditions in Vietnam in recent years, when the economy has been slowing down and inflation rate has been kept at low level, a modest fiscal relaxation and devaluation policy could be accepted to promote growth.

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Appendix

List of variables

	Variable	Unit	Explaination
Endogenous			
1	GDPR	Bil.dongs	GDP at constant prices
2	DR	Bil.dongs	Final demand at constant prices
3	IFRD	Bil.dongs	Domestic investment firms at constant prices
4	FDIR	Bil.dongs	Foreign direct investment at VND
5	CPR	Bil.dongs	Private consumption at constant prices
6	XR	Bil.dongs	Export at constant prices
7	MR	Bil.dongs	Import at constant prices
8	TB	Bil.dongs	Trade balance
9	P	%	Inflation rate
10	EMP	Thous.pers	Labor demand
12	PGDP	Index	GDP deflator
13	M2R	Bil.dongs	Real money demand
14	PM	Index	Import deflator
15	SRR	%	Real short run interest rate
16	IR	Bil.dongs	Real total investment
17	ED	Index	Exchange rate index
Exogenous			
16	CGR	Bil.dongs	Government consumption at constant prices
17	ER	dongs/US$	Exchange rate
18	FDI$	Mil US	Real FDI
19	IGR	Bil.dongs	Government investment at constant prices
20	PX$	index	Export trading price
21	PM$	index	Import trading price
22	RI	%	Nominal Interest rate
23	SDR	Bil.dongs	Statistical discrepancy at constant prices
24	WD	index	World demand
25	SR	%	Nominal short run interest rate
26	REVGR	Bil. dongs	Government revenue from tax at 1994 prices

Competition and Privatization in Vietnam: Substitutes or Complements? *

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Abstract: *What is the relationship between privatization and competition policies in the government's policy mix?* Current studies on this issue generate opposite findings and predictions because they abstract from specific economic, political, social, and institutional contexts. This paper studies the issue in the particular context of Vietnam's economy, one prominent feature of which is the unequal treatment given to private, privatized, and public firms. Against this backdrop we analyze the welfare impact of and the relationship between competition and privatization policies. To this end, we use the Dixit-Stiglitz model of monopolistic competition, but now with asymmetric costs.

We find that the relationship between privatization and competition policies depends on the government's objective. A rent-seeking government that wants to extract rent from businesses chooses not to privatize profitable SOEs and, moreover, promotes institutional arrangements that put excessive costs on private firms. In contrast, a market-friendly government chooses to privatize all profitable SOEs completely. Finally, if the government is benevolent and cares about the well-being of consumers, a competition policy aimed at leveling the playing field between public and private firms is substitutable for the privatization program. Our model also generates endogenous demand for a competition-enhancing policy. Evidence is also provided to support our analytical predictions.

JEL classification: P21, P31
Keywords: Privatization, Competition, Complementarity, Substitutability, Vietnam

1   Introduction

Establishing private property rights and improving economic efficiency through privatizing state-owned enterprises (SOEs) and introducing competition are the two essential steps in transforming a former centrally planned economy to a market-oriented economy. Recently, there has been a debate among economists about the relationship between these two policies and their relative importance.

On one side of the debate are the advocates of the view that privatization should only be considered as a means to broader ends, of which vibrant competition is one.[1] A prominent representative of this view is Joseph Stiglitz, who writes: " Allowing private companies to compete with a monopoly state-owned enterprise can put pressure on it to become more efficient and eventually could lead to its privatization .... *But while competition may well lead to privatization, the opposite is not true* (*italics* added)" (Stiglitz, 1998). This view clearly states that for transition economies, competition is more important and can be a *substitute* for privatization.

On the other side are advocates of the view that without private ownership, competition is ineffective since the competition among SOEs is meaningless in the absence of the true competitors - the private firms with a profit-maximizing motivation. Here I can do no better than quoting Brown and Earle (2001): "According to this view, competition and privatization are *complements* in their effects on enterprise performance: privatization may be enhanced by more competitive markets, *but competition cannot substitute for privatization* (*italics* added)." Brown and Earle (2001) also note that this debate indeed originated from an earlier hot debate about "big-bang" vs. "gradualism", in which the advocates of big-bang adopt the complementarity view, while the supporters of gradualism are in favor of the substitutability view.[2]

There has not yet been a clear-cut empirical answer to the question raised in the theoretical debate. On the one hand, some empirical studies support the big-bang complementarity view. Li and Xu (2002) study the effect of competition and privatization on the performance of firms in the telecommunication industry around the world. They find that the privatization and competition are complements in the sense that they reinforce each other in terms of output growth, labor and total factor productivity, and network expansion. Brown and Earle (2001), in their study of more than 13,000 manufacturing firms in Russia between 1992 and 1999, also find that "[P]rivatization improves firm efficiency whether or not the firm faces competition, while reducing market concentration improves firm efficiency only if the other firms in the market are private."

On the other hand, some empirical studies confirm the theoretical predictions of the gradualism school of reform. Anderson, Lee and Murrell (2000) report in their study on competition and privatization in Mongolia that while competitive firms are nearly twice as efficient as monopolies, there is no evidence confirming a positive effect of private ownership on firm performance. In contrast, the authors find that state ownership is significantly more effective in improving firm productivity than private ownership.

Our criticism of this debate over the relationship between privatization and competition and their relative importance is that the debate should not abstract from the economic,

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[1]In Vietnam, "equitisation" rather than privatization has been used to refer to the transformation of a SOE to a share-holding company by one of the following methods described in section 2.1. In this paper, however, we use the word "privatization" for the sake of consistency with the literature.

[2]For a detailed discussion of big-bang vs. gradualism debate, see Dewatripont and Roland (1995), Murphy et al. (1992), and Vu (2002)

political, social, and institutional context. Abstracting from context is the reason for the opposite predictions and findings in both the theoretical and the empirical studies. For example, Blanchard and Kremer (1997) show that, in contrast to the conventional wisdom, the intensification of competition in product markets resulting from a liberalization may well be inefficient in the absence of an effective mechanism of contract enforcement. Similarly, privatizing state-owned assets into the "wrong hands", without an effective mechanism of corporate governance, hard budget constraints, and an incorruptible judicial system, turns out to be detrimental to the growth of the economy (Black et al. 2000, Djankov and Murrell 2002, Stiglitz 1999, Tornell 1999). Djankov and Murrell (JEL 2002), in their survey of more than 100 empirical papers on the determinants of enterprise restructuring in transition countries, find that privatization is strongly associated with more restructuring, but at the same time that the identity of the owners of the privatized firms matters for the benefits of restructuring. In particular, in contrast to the common belief, they find that "[S]tate ownership within partially-privatized firms is surprisingly effective." With respect to the role of competition, Djankov and Murrell find evidence that competition in product markets has a significant effect in improving the performance of the enterprises. The effects are different in Eastern Europe (EE) than in the Commonwealth of Independent States (CIS). Djankov and Murrell suggest that this difference is due to the difference in the quality and development of institutions in the two regions. In short, merely counting the number of SOEs subject to privatization and measuring market concentration do not tell us much about the effectiveness of privatization and competition policies. The methods used and the context in which these policies are implemented matter greatly.

This paper is also concerned with the issue of *substitutability* and *complementarity* between *privatization* and *competition*. But it differs from the other studies in two respects. First, we study the issue in the particular context of Vietnam's transitional economy, one prominent feature of which is the unequal treatment given to private, privatized, and state-owned firms. Secondly, we study the issue from the perspective of a government that initiates both privatization program and competition policy, as in the case of Vietnam. Specifically, we are interested in the interaction between privatization and competition policies designed under different government objectives.

To this end, we adapt the well-known Dixit - Stiglitz model of monopolistic competition (hereafter D-S) in three ways. First, to simplify the analysis without loss of generality, we consider an economy with only one sector that produces differentiated goods.[3] Second, we assume that there are initially SOEs and private firms and that the government tries to protect these SOEs from competition by raising the cost barriers applied to private firms.[4] Third, instead of assuming common fixed and marginal costs for all firms as in D-S, we assume that public and private firms face different fixed and marginal costs. The costs differ because the socialist orientation of the Vietnamese government has led it to design different sets of law and regulations for private and public firms.

In this paper, we refer to *competition policy* as the government's leveling of the playing field, i.e. to reduce the gap in effective costs applied to the private and public sectors. In the context of our model in which there are public and private firms (sections 3 and 4) or privatized and private firms (section 5), the extent of the cost gap between the public

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[3]We earlier developed a two-sector model in which private firms produced a standardized consumer good in one sector and both privatized and private firms produced differentiated consumer goods in the other sector but this complication does not generates much additional insight.

[4]This assumption squares well with the fact that a private sector existed even during the time that Vietnam adopted the Neo-Stalinist model.

(or privatized) and private firms may well depend on the ownership structure of the firms (because the government cares about its profit in the SOEs and privatized firms.)

The rest of the paper is structured as follows. Section 2 considers some relevant facts about Vietnam's privatization program and competition policy. We argue in this section that the anti-competitive restrictions in Vietnam originate primarily from the government's pervasively unequal treatment of the private sector, and that the key ingredient in Vietnam's competition policy is the commitment to first reduce, and then eliminate, all unequal social and economic costs imposed on private firms.

Section 3 develops the modified D-S model of monopolistic competition. Section 4 provides a framework in which public firms compete with private firms. This section argues that if an unfair competition policy is adopted, the economy has to bear many costs, including: (i) a loss in consumer welfare; (ii) a reduction in private firms' profits in the short term and a welfare loss caused by hindering them from entering the market in the long term; (iii) inefficient SOEs that cannot compete effectively with private firms; (iv) a fiscal burden on the government because of its subsidization of the SOEs; (v) corruptible politicians; and (vi) a low-competition trap. These costs then give rise to an endogenous demand for a welfare-enhancing competition policy.

Section 5 then studies the relationship between the government's decisions about the degree of privatization and competition so as to achieve its objectives. We find that the relationship between the degree of privatization and competition depends critically on the type (or the objective) of the government. A rent-seeking government that wants to extract rent from business firms chooses not to privatize profitable SOEs and, at the same time, promotes institutional arrangements and policies that put excessive costs on the private firms. In contrast, if a government is benevolent in the sense that it cares for the well-being of consumers, a competition policy aimed at leveling the playing field between the public and private firms is substitutable for the privatization program. Section 6 concludes the paper and suggests directions for future research.

2 Some Aspects of Privatization and Competition in Vietnam

2.1 Methods of Privatization

The Vietnamese government classifies all SOEs into three groups according to their level of importance. Group 1 consists of public enterprises that are strategically important and should therefore be put under complete state ownership and control. SOEs in this group are not subject to privatization. Group 2 consists of SOEs for which the government wants to keep controlling (or golden) shares if they are privatized. Group 3 consists of all remaining SOEs, which can be privatized by one of four methods: (i) keeping the state shares intact and issuing new shares (i.e. corporatization); (ii) selling a fraction of the state shares; (iii) detaching and then privatizing parts of an SOE (mostly applied to the state general corporations); and (iv) selling off all state shares to workers and private shareholders (mostly applied to loss-making SOEs). This paper is concerned with the SOEs in the last two groups. For a more detailed description of the methods of privatization used in Vietnam, see the Appendix.

These methods of privatization reveal the interventionist nature of the government in deciding the size of the state's share and the extent of its control rights in firms. Both

decisions are made with the goal of extracting rent from monopoly power. It is clear that the government wants to hold on to the economic base of a socialist-oriented economy by maintaining the monopoly power of SOEs in many areas, and to use economic power to support its political power. Moreover, it seems that the Vietnamese government wishes to get rid of poorly-performing SOEs so that good images of the public sector are preserved and financial burdens are relieved. In contrast to Eastern European experience, a large numbers of the SOEs that have been listed for privatization in Vietnam are unprofitable firms.[5] Also, as expressed clearly in the methods of privatization, the privatization of monopolistic (and therefore profitable) SOEs has mostly been partial.

2.2 Status of Privatized Firms Before and After Privatization

In the literature, privatization is conceptualized as a means of transferring ownership and control rights from the state to private shareholders and managers. For Vietnam, this conceptualization is correct but incomplete, since privatization obviously brings about profound changes in the institutional and operational environment of newly privatized firms. It is useful to compare institutional constraints facing (partially) privatized firms vis-a-vis those of the SOEs and (fully) private firms.

Among the three groups of firms, the SOEs are best treated. Privatized firms are better treated than private firms. In principle privatized firms are entitled to receive some favorable treatment (compared with fully private firms) according to Vietnam's Law on Encouraging Domestic Investment. This law allows privatized firms to exempt up to 50% of their profit from taxation in the first several years after being privatized. The privatized firms are also permitted to borrow money at the state commercial banks and other state credit institutions at the same rates and terms as the SOEs. In fact, however, as soon as a SOE has been privatized, it is subject to differentiated treatment (compared with the SOEs) from the state's commercial banks, credit and financial institutions, and other state organizations (Huy V. Nguyen 2002, p.8; Cuong T. Tran 2002, p.7).[6] [7] The reasons for the discrimination of privatized firms vis-a-vis the SOEs are changes, brought about by privatization, in legal status (from an SOE governed by the Law on State Enterprises to a private enterprise governed by the Law on [Private] Enterprises), economic status (from "the leading role" which is backed by the state to "a component" of the national economy[8]), and in social status (from belonging to "the nation" to belonging to "private hands").[9] This discrimination is the source of many distortions both within the firm and in the management of the economy.

In summary, there is a wide gap between the *de jure* and *de facto* status of private, privatized, and public firms. In other words, there is a correspondence between a firm's status and the treatment it receives, resulting in differences in the economic and social costs of doing business for private, privatized, and state-owned firms.

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[5]It is estimated that among all SOEs, one third are unprofitable, one third are just break-even, and the remaining one third are profitable, presumably thanks to their monopoly power and other favorable conditions.

[6]Huy V. Nguyen is a specialized member in the Central Steering Committee for Equitization.

[7]Cuong T. Tran is the head of the Enterprise Department of the Central Institute for Economic Management (Ministry of Planning and Investment).

[8]Vietnam's Constitution (1992)

[9]According to a report done by the Mekong Project Development Facility (MPDF 1999), the private firms in Vietnam have a pretty negative image in the eyes of the public, commercial banks, trading partners, and potential employees.

2.3 Ownership Structure in Production

In many Eastern European (EE) and Commonwealth of the Independent States (CIS) countries, privatization is a means of establishing private property rights. In Vietnam, the situation is somewhat different since a viable private sector existed even before the implementation of the privatization program. As such, privatization should also be viewed as a means to transform the ownership structure of the economy and the corporate governance of firms, and thereby help foster competition and improve economic efficiency.

The overall structure of ownership in Vietnam has not been substantially changed by the privatization, however. By the end of 2004, the government had privatized about 2,224 SOEs, i.e. about 40% of the total number of SOEs, whose capital amounted to about 8.2% of the total capital of all SOEs. It is projected that the privatization will be completed by 2008. By that time only about 1,200 SOEs will be owned by the state, and most of them are members of state general corporations (SGCs) and the so-called state economic groups (SEGs). Our estimation, however, shows that even if the target is met by 2008, the ownership structure will not be changed significantly if the state general corporations (SGCs), the "white elephants" in Vietnam's economy, are left intact. As of February 2005, SGCs alone accounted for about 80% of the total capital, and about 60% of the total fixed assets of all SOEs. This fact, together with the fact that the state's retained share tends to be high in large and strategically important privatized firms, implies that if there is no significant change in the private sector, then by 2008 state ownership will still be the dominant form of ownership in the economy.

The fact that the state maintains large shares in privatized firms complicates corporate governance and the government's regulations. The *dual role* of the state as the owner in SOEs and privatized firms and as the only regulator makes the possibility of regulatory capture more serious (Stiglitz 1998. See also Hellman and Schankerman 2000, and Hellman and Kaufmann 2001). In short, the SOEs and privatized firms may attempt to use their state ownership as a means of influencing the regulations that directly affect their profits. The state, in caring about its share of the profit of SOEs and privatized firms, may design distorted regulations that favor the firms in which its share is significant.

2.4 Vietnam's Competition Policy

2.4.1 The Importance of Competition to Privatized Firms in Vietnam

There is a belief widely shared among economists that privatization improves the performance of SOEs by creating better governance structures and incentive mechanisms. In Vietnam, there are reasons to doubt that privatization alone creates the right incentives for the managers of privatized firms. First, for many privatized firms the new board of managers is essentially the same as the one before privatization.[10] Second, there is no change in management style in many privatized firms, especially those whose state share is large. Third, the privatized firms commonly lack strategic investors since most of the shares are either sold to insiders or retained by the state, and the role of strategic investors is not emphasized during the process of privatization (Cuong T. Tran 2002, pp.2-3). Fourth, since the stock market is underdeveloped, there is almost no take-over threat. Fifth, as

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[10] A new survey of 261 newly privatized firms in the South in 2002 reveals that in more than 80% of the firms there was no change in management posts, both during and after the privatization (Hao G. Nguyen 2002).

in other economies in transition, the enforcement of regulations is very weak in Vietnam. All these reasons make a strong case for promoting competition so that product market competition can, to some extent, substitute for the lack of capital market discipline (Simon et. al. 1999), the lack of incentive to innovative of the SOEs, the weak monitoring of shareholders and creditors, and the weak enforcement of regulations. In addition, if competition is brought about by lowering entry barriers, new firms will be able to enter the market so that the substantial "dead capital" held by the people can be mobilized (de Soto 2000).

Competition is beneficial to consumers as well. With competition, there is pressure on firms to improve product quality and introduce new products into the market. Consumers who have preferences for quality and variety will greatly benefit from their freedom to choose among more products and at more reasonable prices.

2.4.2 Vietnam's Competition Law

The first competition law of Vietnam came into effect on July 1, 2005. The law has chapters on prevention of anti-competitive practices, abuse of market dominance, merger, consolidation and acquisition, and unfair competition. Nevertheless, it fails to address the main sources of anti-competitive restrictions in Vietnam, which are the monopoly of the SGCs and SEGs, the dominance of large SOEs, and the unequal treatment of the private sector by state-owned banking and financial organizations. In this paper, therefore, we refer to competition policy as the decision of the government to eliminate this unequal treatment by reducing the gap in the effective costs. It seems that Vietnamese lawyers have recognized this inadequacy. For example, the Director of the Law Department of the Ministry of Trade writes: "It can be said that monopolistic enterprises are merely established by administrative decisions, not by free and equitable competition. Therefore, it is critical for Vietnam to control and limit state monopolistic enterprises."

2.5 The New Enterprise Law and the Private Sector Development

Vietnam embarked on the transition from a centrally planned economy to a socialist market economy in 1986. As the term *socialist market economy* implies, the Vietnamese government has been trying to develop a market economy while maintaining the socialist ideology, characterized by the leadership of the Communist Party and the dominance of the state sector in the economy. It is, therefore, not surprising that the private sector has not received equal treatment relative to the state sector, even though it accounts for equal share in GDP and higher share in both industrial output and job creation.

Recently, there have been efforts to improve the legal and institutional environment in the private sector, of which the most notable and successful was the introduction of the new Law on [Private] Enterprise (LOE) passed in 1999.[11] Between January 2000 and December 2005, approximately 160,000 new businesses had registered compared with 45,000 firms in the previous nine years (1991-1999). It was estimated that these 160,000 new businesses created about 4 million new jobs and contributed US$16 billion in registered capital. It is also estimated that on average it costs a private firm around US$ 4,500-6,500 to create a

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[11]The first law on private enterprise was enacted in 1990 and titled the "Law on Private Enterprise" as opposed to the "Law on State Enterprise", which is still in use to govern the state-owned enterprises.

new job, whereas it costs a SOE at least US\$ 13,500-18,000, i.e. three times as much.[12]

Successes of the LOE 1999 can be attributed to its breakthrough in opening up Vietnam's centrally planned economy to the energetic private sector. More specifically, the LOE improves the business environment in at least three respects. First, it has changed the licensing system and thereby greatly reduced the cost of obtaining a licence (or the entry cost.) Before 2000, private businesses, had to apply, on average, to 34 different agencies to obtain a licence. The procedure on average took 99 days and cost US\$330. After the enactment of the LOE, it takes businesses only two weeks (or even less) and costs them about US\$13 to obtain a business licence. Second, the LOE allows a much wider and flexible scope of business activities. In the past, activities of private firms were restricted to operations for which they were granted license. If firms wanted to change or add a new business activity, they had to go through the entire process again. The new LOE, in contrast, allows businesses to operate in all industries except those restricted by law. Moreover, a new license is not required for changing or adding new activities. And third, the LOE removes the minimum capital requirements, except for some special industries (e.g., insurance and banking.)

Despite the above-mentioned successes brought about by the LOE 1999 (and perhaps also the new unified enterprise law), there are still many obstacles on the way to a complete level playing field for all economic sectors. The public sector continues to enjoy many privileges. The private sector is still subject to discrimination and biased treatment. Economically, problems relating to land access, credit and training remain unsolved. Politically, the proper role of the private sector in the economy continue to generate heated debates. Socially, society at large still maintains somewhat negative attitudes towards the private sector.

3 Public and Private Firms in a Monopolistic Competition Framework

In this section we adapt the well-known Dixit-Stiglitz model of monopolistic competition (hereafter D-S) to capture the differential treatment given to public and private enterprises by the Vietnamese government's.[13]

3.1 Consumer Problem

The utility of the representative consumer is represented by the function:

$$U(x_1, x_2, ..., x_n) = \sum_{i=1}^{n} x_i^{\rho} \tag{1}$$

where x_i is the consumption of the ith variety, n is the number of available varieties (or the number of active producers,) and $0 < \rho < 1$ is a constant representing the intensity of consumer preferences for varieties. It can be shown that $\sigma \equiv \dfrac{1}{1-\rho}$ is the constant elasticity of substitution between any two varieties.[14]. In this paper, the market competitiveness is

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[12] *Vietnam Investment Review*, No. 643, February 2, 2004.

[13] Note that privatization (and therefore privatized firms) will not be introduced until section 5. Also, we are only concerned with the SOEs subject to privatization (i.e., in Groups 2 and 3).

[14] $0 < \rho < 1$ implies that $\sigma > 1$

measured by n.

Income of the representative consumer, denoted by Y, comes from endowment, which is given to the consumer in the beginning of every period.[15] The problem of the representative consumer is:

$$\max_{x_i} U = \sum_{i=1}^{n} x_i^{\rho} \quad s.t. \quad \sum_{i=1}^{n} p_i x_i = Y$$

where p_i is the market price of the ith variety.

The marginal rate of substitution between any two varieties is equal to their price ratio, i.e. $\dfrac{x_i^{\rho-1}}{x_j^{\rho-1}} = \dfrac{p_i}{p_j}$, or

$$x_i = x_j \left(\frac{p_i}{p_j} \right)^{\frac{1}{\rho-1}} = x_j \left(\frac{p_i}{p_j} \right)^{-\sigma} \tag{2}$$

We assume that initially there are only two sectors in the economy: public and private. The public sector consists of m identical SOEs and the private sector consists of $(n - m)$ identical private firms. The number of public firms m is exogenously given, whereas the total number of active firms n is determined endogenously (see section 3.4). Public firms are indexed 1 and private firms are indexed 2. Equation (2) then reads:

$$x_1 = x_2 \left(\frac{p_1}{p_2} \right)^{-\sigma} \tag{3}$$

Substituting (3) into the consumer's budget constraint and solving for x_1 and x_2:

$$
\begin{aligned}
x_1 &= \frac{p_1^{-\sigma} Y}{m p_1^{1-\sigma} + (n-m) p_2^{1-\sigma}} = \frac{p_1^{-\sigma} Y}{P} \\
x_2 &= \frac{p_2^{-\sigma} Y}{m p_1^{1-\sigma} + (n-m) p_2^{1-\sigma}} = \frac{p_2^{-\sigma} Y}{P}
\end{aligned}
\tag{4}
$$

where $P \equiv m p_1^{1-\sigma} + (n-m) p_2^{1-\sigma}$.

3.2 Producers' Problem

Our focus in this section is on the behavior of producers. As in D-S, we assume that there are economies of scale at the level of variety. This assumption, together with the assumptions about the preferences of the consumer for variety and free entry and exit of firms, implies that each variety is produced by only one firm. In other words, the number of varieties equals the number of active producers. We also assume that SOEs (private firms) incur some fixed cost a_1 (a_2) and a common marginal cost c_1 (c_2). Each firm solves:

$$\max_{p_i} (p_i - c_i) x_i - a_i = (p_i - c_i) \frac{p_i^{-\sigma} Y}{P} - a_i$$

---

[15] For simplicity, we do not consider the labor market because it complicates the analysis without adding much insights. See Aghion and Blanchard (1994) for an excellent analysis of labor market and the reallocation of labor from the public sector to the private sector in transition economies.

where $i \in \{1, 2\}$. If we assume that n is large and there is no strategic interaction among firms (i.e., the aggregate price index P is taken as given by all firms), then each firm maximizes its profit by equating marginal revenue with marginal cost:

$$p_i \left(1 - \frac{1}{\sigma}\right) = c_i \tag{5}$$

Note also that in our model, the elasticity of demand for each good equals the elasticity of substitution σ between any two varieties.

3.3   The Role of the Government

To simplify the analysis, the role of the government in this paper is restricted to only two activities: (i) designing an institutional framework and its corresponding enforcement mechanism; and (ii) managing the SOEs (in section 4) or representing the public ownership in privatized firms (in section 5). There is no taxation and the only source of the government revenue is the profit of public firms (or the profit share in privatized firms). This revenue is used for designing, implementing, and enforcing laws and regulation and subsidizing SOEs. The remaining (if any) is kept by the politician and does not affect consumer welfare.

The government has a certain degree of discretion over the design of institutional arrangements so as to achieve its objective. It is assumed that both the marginal costs (c_1, c_2) and fixed entry costs (a_1, a_2) of public and private firms are subject to government's manipulation. In sections 3 and 4, the institutional framework is assumed to be given. The active role of the government in designing institutions (e.g., competition law) to serve its goals will be considered in section 5.

3.4   Market Equilibrium

Equilibrium is characterized by three conditions: (1) all firms maximize their profit; (2) the representative consumer maximizes her utility; and (3) due to free entry and exit, the marginal firm just breaks even. Conditions (1) and (2) have been considered in the previous sections. This section is devoted to the third condition.

Now we introduce a modification from the standard D-S model. We assume that public and private firms are asymmetric with respect to both marginal and fixed costs.

Note that, in equilibrium, the price and quantity are the same for all firms within each sector. The break-even condition of the marginal firm n, which is a private firm, can be written as:

$$(p_2 - c_2)x_2 = a_2 \tag{6}$$

where c_2 is the marginal cost and a_2 is the fixed cost of the marginal private firm.

Substituting p_1 and p_2 from equation (5) into equation (4) gives:

$$
\begin{aligned}
x_1 &= \frac{\sigma - 1}{\sigma} \frac{c_1^{-\sigma} Y}{m p_1^{1-\sigma} + (n - m) p_2^{1-\sigma}} \\
x_2 &= \frac{\sigma - 1}{\sigma} \frac{c_2^{-\sigma} Y}{m p_1^{1-\sigma} + (n - m) p_2^{1-\sigma}}
\end{aligned}
\tag{7}
$$

Using equation (5), (6), and (7), it can be shown that the number of active producers in equilibrium is:

$$n = \frac{Y}{\sigma a_2} + m(1 - c^{1-\sigma}) \tag{8}$$

10

where $c \equiv \dfrac{c_1}{c_2}$ is the marginal cost ratio that reflects the asymmetry in marginal costs between the SOEs and private firms.

Substituting n from equation (8) back to (7) gives:

$$
\begin{aligned}
x_1 &= \frac{(\sigma - 1)a_2 c_1^{-\sigma}}{c_2^{1-\sigma}} \\
x_2 &= \frac{(\sigma - 1)a_2}{c_2}
\end{aligned}
\tag{9}
$$

Note that x_1 and x_2 depend only on the substitution elasticity and the cost structure of firms and do not depend on n.

Substituting x_1, x_2, and n back to equation (1) gives:

$$
U = \frac{(\sigma - 1)^{\frac{\sigma - 1}{\sigma}} Y}{\sigma a_2^{\frac{1}{\sigma}} c_2^{\frac{\sigma - 1}{\sigma}}}
\tag{10}
$$

Since all private firms are symmetric, their profits are all the same and equal zero, i.e. $\pi_2 = 0$. The profit of the SOEs (π_1), however, can be positive or negative, depending on the initial cost asymmetries in the economy. It is easy to show that:

$$
\pi_1 = (p_1 - c_1)x_1 - a_1 = c^{1-\sigma}a_2 - a_1
\tag{11}
$$

The profit of the SOEs (and, therefore, government's revenue) and the utility of the representative consumer are both functions of the cost asymmetries in the economy. It is therefore possible, and presumably desirable, for the government to manipulate c_1, c_2, a_1, a_2 so as to achieve whatever goal it might pursue. The government can manipulate the relative costs applied to the SOEs and private firms by crafting appropriate institutions (North, 1990) or simply by imposing differential fees on public and private firms.

4   Competition Policy and Its Impacts

Our model captures an important feature of the Vietnamese business environment, i.e. the SOEs and private firms have very different costs of doing business. This difference in costs comes about partly because the government designs different sets of law and regulations for private and public firms.[16] We start our analysis of the impact of competition policy by making three key assumptions, all of which are well supported empirically. First, to reflect the relatively productive inefficiency of the SOEs compared to private firms, we assume that initially $c_1 > c_2$. Second, we assume that $a_1 < a_2$. This difference in the fixed cost reflects the biased treatment against the private sector in Vietnam as discussed in the introduction. And third, the government can, at least to some extent, manipulate the cost structures faced by both public and private firms. In the following, *competition policy* is referred to as the government's decision to level the playing field of both sectors, i.e. to reduce the gap in the effective costs facing private and public firms (i.e., narrow the gaps between a_1 and a_2 and between c_1 and c_2.)

As noted by Blanchard and Giavazzi (2001), many regulatory barriers to entry are in the the form of legal and administrative restrictions on entry rather than monetary costs.

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[16]In Vietnam, there are two separate sets of law: Private Enterprise Law and Public Enterprise Law.

It follows that a_1 and a_2 can be interpreted as shadow costs. One way to think about the fixed-cost gap $(a_2 - a_1)$ is that it is a pure waste due to government regulation or differential treatment of the private sector. For example, private firms have to devote more time to fulfill bureaucratic requirements, or they have to pay higher fees and to bribe tax collectors and official inspectors. The gap in the marginal cost $(c_1 - c_2)$ comes from two main sources: the difference in the X-efficiency between public and private firms and the government's biased treatment against private firms. For example, private firms are subject to higher interest rates when they borrow from the state commercial banks, or they have to pay higher prices for certain inputs provided by the SOEs.[17]

4.1 Welfare Effect of Competition Policy

This section studies how competition policy affects the utility of the representative consumer and the profit of producers. From equation (8): $n = \dfrac{Y}{\sigma a_2} + m(1 - c^{1-\sigma})$, it follows that $\dfrac{\partial n}{\partial a_2} < 0$. It can also be verified from equation (10) that $\dfrac{\partial U}{\partial a_2} < 0$. Market competitiveness in equilibrium, measured by the number of active firms (n), also depends on the asymmetry in marginal costs (i.e., $\dfrac{\partial n}{\partial c} > 0$.) It is easy to show that a lower value of c_2 gives rise to a higher level of consumer utility in equilibrium (i.e., $\dfrac{\partial U}{\partial c_2} < 0$.)

Lemma 1 $\dfrac{\partial n}{\partial a_2} < 0$, $\dfrac{\partial n}{\partial c_2} < 0$, $\dfrac{\partial U}{\partial a_2} < 0$, *and* $\dfrac{\partial U}{\partial c_2} < 0$.

Now let us consider the effect of competition policy on the profit of active producers. In long-run equilibrium, all private firms receive no profit $(\pi_2 = 0.)$ It is straightforward to verify that $\dfrac{\partial \pi_2}{\partial a_2} < 0$, and $\dfrac{\partial \pi_2}{\partial c_2} < 0$. In the long run a higher a_2 keeps private firms from entering the market, and a higher c_2 forces some private firms to exit.

As for public firms, their profit is given by $\pi_1 = c^{1-\sigma} a_2 - a_1$ (equation (11)). Government revenue is the sum of all SOEs' profit and is given by: $m\pi_1 = m(c^{1-\sigma} a_2 - a_1)$. That is, the profit of public firms (and, therefore, government revenue) depends entirely on the cost structures of the economy. From equation (11):

Lemma 2
$$\frac{\partial \pi_1}{\partial c_1} < 0, \quad \frac{\partial \pi_1}{\partial a_1} < 0, \quad \frac{\partial \pi_1}{\partial c_2} > 0, \quad \frac{\partial \pi_1}{\partial a_2} > 0; \tag{12}$$

that is, public firms benefit both from a reduction in their own costs and from an increase in the costs of private firms.

4.2 Selection Effect of Competition Policy

We already see that lower values of a_2 and c_2 lead to higher n, or equivalently, more private firms in equilibrium. This section considers the effect of competition policy on market shares of public and private firms in equilibrium. Market share is measured in

---

[17]We assume that the revenue received from imposing higher input prices and interest rates on private firms does not affect the consumer welfare directly.

terms of quantity rather than expenditures. Let us first consider the effect of competition policy on the market share of public firms.

From equation (9), $x_1 = \dfrac{(\sigma - 1)a_2 c_1^{-\sigma}}{c_2^{1-\sigma}}$ and $x_2 = \dfrac{(\sigma - 1)a_2}{c_2}$. Thus, the market share of any one public firm is given by:

$$s_1 = \frac{x_1}{mx_1 + (n - m)x_2} = \frac{c^{-\sigma}}{mc^{-\sigma} + (n - m)} = \frac{1}{m + (n - m)c^{\sigma}} \tag{13}$$

Given c_1 and c_2, a decrease in the fixed cost of entry a_2 results in an increase in n, and therefore a decrease in the market share of each public firm (i.e., $\dfrac{\partial s_1}{\partial a_2} > 0$.) Moreover, given a_2, it can be shown that $\dfrac{\partial s_1}{\partial c_2} > 0$; that is, a decrease in c_2 will also lead to a reduction in market share of each public firm.

Now consider the effect of competition policy on the market share of all public firms, which is given by:

$$ms_1 = \frac{m}{m + (n - m)c^{\sigma}}$$

It can be verified that $\dfrac{\partial (ms_1)}{\partial n} < 0$, or equivalently, $\dfrac{\partial (ms_1)}{\partial a_2} > 0$; and that $\dfrac{\partial (ms_1)}{\partial c_2} > 0$. That is to say, a more competitive environment (i.e., lower a_2 and c_2) deceases the market share of the public sector. We refer to this consequence of competitive policy as the *selection effect*.

Lemma 3 $\dfrac{\partial s_1}{\partial a_2} > 0,\ \dfrac{\partial s_1}{\partial c_2} > 0,\ \dfrac{\partial (ms_1)}{\partial a_2} > 0,\ and\ \dfrac{\partial (ms_1)}{\partial c_2} > 0.$

4.3 Output Effect of Competition Policy

Let Q be the total output produced by both public and private sectors. It can be shown that:

$$Q = mx_1 + (n - m)x_2 = \frac{\sigma - 1}{\sigma} \frac{n - m(1 - c^{-\sigma})}{n - m(1 - c^{1-\sigma})} \frac{Y}{c_2}. \tag{14}$$

Now consider the effect of a competition-enhancing policy on Q. We know that:

$$
\begin{aligned}
x_1 &= \frac{(\sigma - 1)a_2 c_1^{-\sigma}}{c_2^{1-\sigma}} \\
x_2 &= \frac{(\sigma - 1)a_2}{c_2} \\
n &= \frac{Y}{\sigma a_2} + m(1 - c^{1-\sigma})
\end{aligned}
$$

A decrease in a_2 therefore has two effects. It increases the number of firms in equilibrium, but it decreases both x_1 and x_2. It is straightforward to show that the combined effect of a decrease in a_2 is an increase in the total quantity Q.[18]

As for c_2, there are also two opposing effects associated with a reduction of c_2. A lower value of c_2 increases n and x_2, but it decreases x_1. The overall effect is unclear and depends on the value of Y, which is given exogenously.

---

[18]Our model abstracts from the labor market, but if we assume that a higher output is associated with a lower unemployment rate, then this result implies that a competition-enhancing policy that reduces the entry barrier will contribute to job creation.

Lemma 4 $\dfrac{\partial Q}{\partial a_2} < 0.$

4.4 Cost-Reduction Effect of Competitive Policy

There has been a consensus that public firms often lack the incentives to improve their efficiency when they are shielded from market discipline. In this section, we show that private firms have stronger incentives to invest in technological innovation in order to cut costs. We also show that the presence of innovative private firms will press SOEs to improve their efficiency if they do not want to be driven out of the market.

Suppose that firm i can reduce its marginal cost from c_i to $(c_i - e_i)$ by incurring an effort cost $\dfrac{\delta}{2}e_i^2$, where e_i is the effort level of firm i and $i \in \{1, 2\}$. Consider the situation in which a private firm chooses $\widehat{p}_2$ and $\widehat{e}_2$ to maximize its profit.[19] Again, assume that n is large and there is no strategic interaction among firms. These assumptions imply that the deviating firm take n and the prices of all other firms as given.[20] In other words, $P \equiv mp_1^{1-\sigma} + (n-m-1)p_2^{1-\sigma} + \widehat{p}_2^{1-\sigma}$ is taken as given. The firm's maximization problem is:

$$\max_{\widehat{p}_2, \widehat{e}_2} (\widehat{p}_2 - c_2 + \widehat{e}_2) x_2(\widehat{p}_2) - a_2 - \frac{\delta}{2}\widehat{e}_2^2$$

or

$$\max_{\widehat{p}_2, \widehat{e}_2} (\widehat{p}_2 - c_2 + \widehat{e}_2) \frac{\widehat{p}_2^{-\sigma} Y}{P} - a_2 - \frac{\delta}{2}\widehat{e}_2^2$$

First-order conditions give:

$$\begin{cases} \widehat{p}_2 & : \quad \widehat{p}_2\left(1 - \dfrac{1}{\sigma}\right) = c_2 - \widehat{e}_2 \\[2mm] \widehat{e}_2 & : \quad \dfrac{\widehat{p}_2^{-\sigma} Y}{P} = \delta\widehat{e}_2 \end{cases} \tag{15}$$

These two conditions imply:

$$(c_2 - \widehat{e}_2)^{-\sigma} = \frac{\delta P}{\left(\dfrac{\sigma}{\sigma-1}\right)^\sigma Y}\widehat{e}_2 \tag{16}$$

The solution to the above equation is illustrated in Figure 1. However, the LHS curve and the RHS line intersect at two points. To decide the value of $\widehat{e}_2$ that maximizes $\widehat{\pi}_2$, we need the second-order condition.

The second-order condition with respect to $\widehat{e}_2$ reads:

$$\frac{\partial (c_2 - \widehat{e}_2)^{-\sigma}}{\partial \widehat{e}_2} - \frac{\delta P}{\left(\dfrac{\sigma}{\sigma-1}\right)^\sigma Y} < 0,$$

meaning that at $\widehat{e}_2^*$ the slope of the LHS curve must be lower than the slope of the RHS line.

---

[19]I am grateful to Richard Arnott for his advising me to go into this direction. This is also the approach adopted by Aghion and Schankerman (forthcoming, 2004).

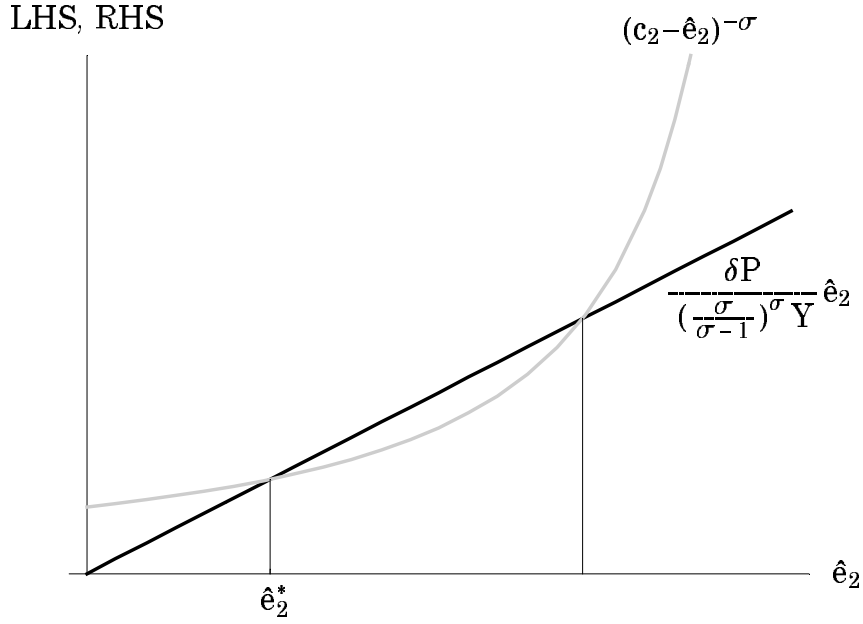[20]We do not have to worry about the change in n since in equilibrium, both p_i and x_i are independent of n.

Figure 1: The optimal level of effort $\widehat{e}_2^*$

Now assume that a public firm can also exert an effort level $\widehat{e}_1$ in order to reduce the marginal cost to $(c_1 - \widehat{e}_1)$. It is straightforward to show that $\widehat{e}_1^*$ is the solution of the following equation:

$$(c_1 - \widehat{e}_1)^{-\sigma} = \frac{\delta P}{\left(\dfrac{\sigma}{\sigma - 1}\right)^{\sigma} Y} \widehat{e}_1 \tag{17}$$

$\widehat{e}_1^*$ and $\widehat{e}_2^*$ are illustrated in Figure 2. Clearly, $\widehat{e}_1^* < \widehat{e}_2^*$.[21] The intuition of this result is simple. Since the profit gains from cost reduction are proportional to market share, a public firm with lower market share has less incentive to exert effort to reduce cost.

$\widehat{e}_1^* < \widehat{e}_2^*$ implies a higher cost ratio $\widehat{c} \equiv \dfrac{\widehat{e}_1^*}{\widehat{e}_2^*}$. This in turn implies that both profit and market share of public firms are decreased (see equations 11 and 13.)

Lemma 5

$$\frac{\partial e_i^*}{\partial c_i} < 0 \Rightarrow e_2^* > e_1^* \tag{18}$$

Another way to see the effect of the cost-cutting effort made by private firms on public firms is to find the effort level that needs to be made by public firms to maintain their profit. This effort level $\widetilde{e}_1$ is such that:

$$\frac{c_1(\widetilde{e}_1)^{1-\sigma}}{c_2(\widehat{e}_2^*)^{1-\sigma}} a_2 - a_1 = \frac{c_1^{1-\sigma}}{c_2^{1-\sigma}} a_2 - a_1,$$

or equivalently:

$$\frac{c_1 - \widetilde{e}_1}{c_2 - \widehat{e}_2^*} = \frac{c_1}{c_2} \qquad \Longleftrightarrow \qquad \frac{\widetilde{e}_1}{\widehat{e}_2^*} = \frac{c_1}{c_2} \tag{19}$$

---

[21]This result is interpreted by Aghion and Schankerman (2004) as reflecting the market share effect. In Boon (2004) terminologies, public firms adopt a defensive (or downsizing) strategy whereas private firms follow an enterprising strategy.
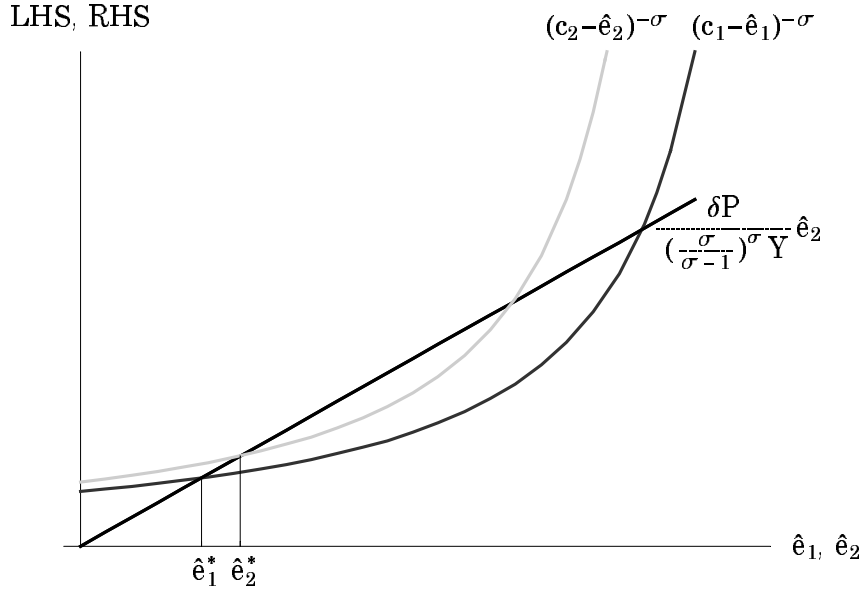
15

Figure 2: The optimal level of effort $\widehat{e}_1^*$ and $\widehat{e}_2^*$

If we maintain the assumption that public firms are less efficient than private firms (i.e., $c_1 > c_2$), then equation (19) implies that to maintain the same level of profit, public firms have to exert a higher level of effort than private firms. We refer to this effect as the *innovation pressure effect.*

4.5 Subsidization of the SOEs

As in the previous section, assume that private firms exert effort level e_2 to reduce cost from c_2 to $(c_2 - e_2)$. As has been shown, both profit and market share of public firms are decreased as the result of a higher effort level made by private firms. Obviously, without the help from outside, competition will potentially drive public firms out of the market. Facing this challenge, public firms seek help (e.g., subsidy) from the government – their traditional protector. Note that public firms' request for subsidies squares well with the government's political goal of maintaining a large and vibrant public sector. Public firms can also mitigate the challenge of competition by bribing the politician so that he creates new laws and regulations that impose higher costs on private firms. In this section, we will consider the effects of competition policy on the amount of subsidy given to public firms by the government. The bribing issue will be considered in the next section.

By expending an effort level $\widehat{e}_i^*$ firm i reduces its marginal cost to $(c_i - \widehat{e}_i^*)$. But since $\widehat{e}_2^* > \widehat{e}_1^*$, private firms gain more market share and drive down both the market share and the profit of public firms. If the government wants to maintain a significant public sector for political reasons, it then has to subsidize public firms (the so-called "soft-budget constraints".) To maintain the same level of profit for public firms the government has to give each public firm a subsidy S:

$$
\begin{aligned}
S &= \left[\frac{c_1^{1-\sigma}}{c_2^{1-\sigma}} a_2 - a_1 \right] - \left[\frac{(c_1 - \widehat{e}_1^*)^{1-\sigma}}{(c_2 - \widehat{e}_2^*)^{1-\sigma}} a_2 - a_1 \right] \\
&= \frac{[c_2(c_1 - \widehat{e}_1^*)]^{\sigma-1} - [c_1(c_2 - \widehat{e}_2^*)]^{\sigma-1}}{[c_1(c_1 - \widehat{e}_1^*)]^{\sigma-1}} a_2
\end{aligned}
\tag{20}
$$

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Clearly, $\frac{\partial S}{\partial a_2} > 0$. That is, the higher the initial cost of entry (or the lower the competition), the higher the subsidy that needs to be given to each SOE to maintain its profit level.[22]

Lemma 6 $\frac{\partial S}{\partial a_2} > 0$.

4.6   State Capture and the Competition Trap

As has been shown in previous sections, public firms clearly benefit from an institutional environment that limits competition. An increase in the marginal and fixed costs imposed on private firms unambiguously increases the profit and market share of public firms. In contrast, private firms are clearly harmed by such an environment. This fact explains the motivation of *both* public and private firms to lobby the government to create laws, regulations, and practices that drive costs in the direction they desire. Following Grossman & Helpman (2001) and Aghion & Schankerman (2004), this section uses a simple political economy model in which both special interest groups (i.e., public and private firms) can capture politicians.[23] For simplicity we assume away the free-rider problem emerging from the collective action of public and private firms. We will show that if the politician is corruptible and if competition is initially low, then the economy may be trapped in this low competitive status.

The variable of interest in this section is the fixed cost a_2 borne by private firms.[24] It is assumed that public (private) firms attempt to bribe the politician to increase (decrease) the fixed cost a_2 imposed on private firms. The politician, however, can receive the bribe from either side.

First, let's consider the political cost to the politician if he receives a bribe from either side (i.e., public or private firms.) Assume that the politician's pay-off is proportional to the utility of the representative consumer when he does not receive a bribe from either side. Specifically, if the politician is not corruptible, his payoff is $\lambda U(a_2)$, where λ is a positive number. It follows that the politician's cost of taking the bribe is: $b(a_2) = \lambda \left| \frac{\partial U(a_2)}{\partial a_2} \right|$ where a_2 is the initial policy. Substituting U from equation (10) gives:

$$b(a_2) = \left| \lambda \frac{\partial U(a_2)}{\partial a_2} \right| = \frac{\lambda(\sigma - 1)^{\frac{\sigma-1}{\sigma}} Y}{\sigma^2 c_2^{\frac{\sigma-1}{\sigma}} a_2^{\frac{\sigma+1}{\sigma}}}$$

Public firms are successful in bribing the politician to adopt a policy that increases a_2 if and only if their bribe fully compensates the politician for cost of imposing such a policy, including the political cost $b(a_2)$ and the opportunity cost of forgoing the bribe from private firms. This condition amounts to:

$$m\frac{\partial \pi_1}{\partial a_2} > (n-m)\left| \frac{\partial \pi_2}{\partial a_2} \right| + b(a_2) \tag{21}$$

---

[22]It can also be shown that $\frac{\partial S}{\partial c_2}$ can be positive or negative, depending on the value of the parameters.

[23]For empirical evidence on government capture, see Hellman and Schankerman 2000, and Hellman and Kaufmann 2001.

[24]It is straightforward to extend the analysis of this section to include marginal cost asymmetry.

The LHS is the increase in the total profit of public firms as a result of a marginal increase in a_2. It is also the maximum amount that public firms are willing to bribe the politician in exchange for a policy that imposes a higher fixed cost on private firms. Similarly, the first term on the RHS $\left((n-m) \left| \frac{\partial \pi_2}{\partial a_2} \right| \right)$ is the decrease in the total profit of private firms as a result of a marginal increase in a_2.[25] It is also the maximum amount that private firms are willing to bribe the politician in exchange for his not imposing a higher fixed cost to them. The second term on the RHS $[b(a_2)]$ is the political cost to the politician if he accepts the bribe from public firms.

Equation (21) can be rewritten as:

$$
mc^{1-\sigma} - \frac{\lambda(\sigma-1)^{\frac{\sigma-1}{\sigma}}Y}{\sigma^2 c_2^{\frac{\sigma-1}{\sigma}} a_2^{\frac{\sigma+1}{\sigma}}} - (n-m) > 0
$$

Define $\psi(a_2) \equiv mc^{1-\sigma} - \frac{\lambda(\sigma-1)^{\frac{\sigma-1}{\sigma}}Y}{\sigma^2 c_2^{\frac{\sigma-1}{\sigma}} a_2^{\frac{\sigma+1}{\sigma}}} - (n-m)$. Note that $\psi'(a_2) > 0$.

Let a_2^* be the value of a_2 such that $\psi(a_2^*) = 0$. $\psi'(a_2) > 0$ implies that if initially $a_2 > a_2^*$, then public firms are successful in bribing the politician to increase a_2. The intuition of this result is that, if a_2 is initially high (i.e., the competition is initially low), then the cost of reducing a_2 (i.e., more competitive environment) to public firms is high. It is therefore desirable for public firms to bribe the politician to keep a_2 unchanged, or even to increase a_2 so as to prevent private firms from growing (in terms of both number and market share.)

Lemma 7 *If the fixed entry cost is initially high (meaning competition is low) then the public firms can succeed in bribing the politician for protection. As a result, the economy is trapped in a low competition economy.*

Arguably, given the industry and ownership structure in Vietnam (see 2.3), private firms are more likely to incur higher cost of collective actions because of free-rider problems. This means that a low competition trap is more likely to occur.

4.7   The Endogenous Demand for Competition

It is clear that there is a conflict of interests between the private and public sectors. Private firms want lower values of a_2 and c_2. In contrast, the SOEs want, not only higher a_2 and c_2, but also lower a_1 and c_1. There is also a conflict of interest between consumers and the public sector: Consumers demand a higher level of competition since it gives rise to more product varieties while the public sector wishes to be protected from competition.

These conflicts present a dilemma for the government. On the one hand, the government has reasons to protect public firms from competition. The profit of SOEs is one of the most important sources of government revenue. Politically, the credibility and legitimacy of the government depend on the performance of public firms relative to private firms. The legitimacy of the communist party-state is also greatly influenced by its ability to maintain the significance of the public sector (measured by its contribution to GDP), its market share, and its ability to create jobs, compared with the private sector. By having its citizens beholden on the SOEs for jobs, the government's support and control of power are more

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[25]Since we only consider the effect of a marginal increase in a_2, the entry effect is ignored.

secure. Moreover, a paternalistic government has a vision of a good life, and by maintaining a large and vibrant public sector, it has more control over where the economy, and more generally, where the society are headed. On the other hand, the protection of the SOEs from competition by creating an unequal playing field is very costly to the government. The "artificial" profit of the SOEs (artificial in the sense that this profit would have diminished without government's support) is achieved at costs to both consumers and private sector. That is, the unequal treatment of the private sector by the government potentially creates a huge welfare loss. Moreover, in relying on the protection of the government, the SOEs lack incentives to improve their performance. As a result, the government has to spend a huge amount of money to subsidize SOEs merely to maintain their performance. As shown in equation (20), the amount of subsidy is increasing in the fixed cost imposed on private firms. In summary, we have the following Proposition:

Proposition 1 *An competition policy that is protective of the public sector and biased against the private sector creates many costs for the economy. These costs include: (i) a loss in consumer welfare; (ii) a reduction in private firms' profits in the short term and a welfare loss caused by hindering them from entering the market in the long term; (iii) inefficient SOEs that cannot compete effectively with private firms; (iv) a fiscal burden on the government because of its subsidization of the SOEs; (v) corruptible politicians; and (vi) a low-competition trap.*[26]

It is worth emphasizing that as the gaps between a_2 and a_1 and between c_2 and c_1 grow, these costs also increase. These growing costs then give rise to an *endogenous demand for a welfare-enhancing competition policy.*

5 Government Types, Privatization and Competition Policies

Suppose that the government, facing growing pressures for privatization, decides to privatize all SOEs. In this section we show that competition and privatization alone are not the panacea for the efficiency problems created by the public sector. Specifically, we show that the implementation of competition and privatization policies depends critically on the type (or the objective) of the government. To this end, one simplification and another modification from the standard D-S model are introduced. First, to simplify the analysis, we now assume that all firms (both public and private) are symmetric with respect to the marginal cost, which is normalized to 1. We continue to maintain the assumption that there is an asymmetry in fixed cost between privatized firms and the private firms. Second, we deviate from the standard D-S model by assuming that this *fixed-cost asymmetry* between privatized and private firms depends on the *degree of privatization* of the SOEs. As discussed in the introduction, this difference in the fixed cost reflects the biased treatment against the private sector in Vietnam (note that the government still maintains partial ownership in privatized firms.) Let 1 be the index of m privatized firms, and 2 be

---

[26]We have not considered some other costs that are important to the economy. One is the efficiency cost resulting from driving private firms out of the formal sector and into the informal sector (see Vu and Nguyen, 2004). Another is that because public firms are shielded from competition, and private firms are constrained by unfair competition policy, they are both unprepared for the competition from foreign firms as Vietnam integrates more broadly into the world economy.

the index of $(n-m)$ private firms. Then our assumption amounts to: $a_2(\alpha) \geq a_1(\alpha)$ $\forall$ $\alpha \in [0,1]$, where α is the portion of private ownership in the privatized firm, or the degree of privatization. We should be careful about the interpretation of the fixed cost in this section. Since it is now assumed that all firms employ identical technologies, the difference in the fixed cost assumed in this section is attributed only to the government's unequal treatment of private and public ownership.

5.1 Government's Motivation in the Privatization Program

Given our assumptions, the profit of all private firms is still zero ($\pi_2 = 0$). The profit of a public firm now is: $\pi_1 = a_2(\alpha) - a_1(\alpha)$. It follows that the consumer's profit from her shares in privatized firms is $m\alpha[a_2(\alpha) - a_1(\alpha)]$, and the government's revenue is $m(1 - \alpha)[a_2(\alpha) - a_1(\alpha)]$.

The utility of the representative consumer now is:

$$ U = \frac{(\sigma - 1)^{\frac{\sigma-1}{\sigma}} Y}{\sigma [a_2(\alpha)]^{\frac{1}{\sigma}}} $$

where Y is the income of the representative consumer, now coming from two sources: initial endowment I and profit shares in privatized firms. That is, $Y = I + m\alpha[a_2(\alpha) - a_1(\alpha)]$. Substituting Y back to the expression of U, it can be shown that in contrast to the result in section 4.1, $\dfrac{\partial U}{\partial a_2}$ now can be positive.[27] That is, a decrease in a_2 generates two opposite effects on the utility of the representative consumer. On the one hand, a lower value of a_2 generates more product varieties in equilibrium, thereby leading to a higher consumer's utility. On the other hand, a reduction in a_2 negatively affects the profit of privatized firms in which the consumer holds shares.

This result sheds some light on the motivation of the Vietnamese government in its privatization program. It is quite possible that the privatization program is considered by the Vietnamese government only as a compromise solution to its dilemma discussed in section 4.7. By partially privatizing the SOEs the government can potentially achieve several goals at the same time. It can realize some of the economic benefits of a market economy (e.g., improving consumers' well-being, enhancing the performance of the SOEs) without transferring power to the hands of private individuals. It is worth mentioning that when $\dfrac{\partial U}{\partial a_2} > 0$, the consumer will side with public firms in promoting unfair competition policy that imposes higher cost (i.e. higher a_2) to private firms.

The above analysis of the welfare effects of partial privatization warrants further discussions. Superficially, it seems that by partially privatizing the SOEs together with increasing a_2, the government can improve consumer welfare in some cases (see footnote 27) and increase its revenue. Note, however, that these welfare improvements come at a cost of private firms. Private firms suffer from profit loss in the short term and are forced to exit in the long term. It is also worth mentioning that there are two sources of distortion in our model. The first is monopolistic competition. The second results from the fact that high-cost public firms remain active thanks to the high cost of entry. In addition, the model does not capture the distribution of profits created by privatized firms. In reality, since

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[27] $\dfrac{\partial U}{\partial a_2} > 0$ if $\alpha \sigma m a_1 > I$.

most of the shares (and therefore profits) in privatized firms is concentrated in the hands of very few individuals, an increase in a_2 will clearly benefit only a handful individuals at the cost of the population at large. Moreover, this handful of early winners may then turn into the blockers of further reforms.

The profit share of the government in the privatized firm and the utility of the representative consumer are both functions of the degree of privatization α. It is therefore possible, and presumably desirable, for the government to choose α so as to achieve whatever goal it might pursue. The government's goal, however, depends on its type. In the following subsections, we will consider different types of government, the associated objective, and the consequences of its choice of α.

5.2 A Rent-seeking Government

To reflect the rent-seeking government's bias against the private sector, we assume that the government creates institutional arrangements and policies so as to make the fixed cost of private firms higher than that of partially privatized enterprises. We assume further that a higher degree of privatization (higher α) is associated with a higher cost for the privatized firm and a lower cost for private firms. This assumption is justified on the ground that as the degree of privatization increases, the government's stake in privatized firms decreases. As a result, the government does not care that much about protecting privatized firms. That is, we assume:

$$
\begin{cases}
A1 & : \quad a_2(\alpha) > a_1(\alpha) > 0 \quad \forall\, \alpha \in (0,1) \\
A2 & : \quad a_2'(\alpha) \leq 0,\, a_1'(\alpha) \geq 0 \quad \forall\, \alpha \in [0,1] \\
A3 & : \quad a_2(1) = a_1(1)
\end{cases}
$$

Assumption $(A1)$ captures the government's differential treatment towards the private sector. Assumption $(A2)$ reflects the possibility of regulatory (or state) capture by firms with partial state ownership.

The rent-seeking government wants to maximize its profit with respect to its ownership share in privatized firms. It solves the following problem:

$$
\max_{\alpha} m\pi_g(\alpha) = m(1-\alpha)[a_2(\alpha) - a_1(\alpha)]
$$

Under assumptions $(A1)$, $(A2)$, $(A3)$:

$$
\pi_g'(\alpha) = \underbrace{-[a_2(\alpha) - a_1(\alpha)]}_{(-)} + \underbrace{(1-\alpha)}_{(+)}\underbrace{[a_2'(\alpha) - a_1'(\alpha)]}_{(-)} < 0 \quad \forall\, \alpha \neq 1
$$

That is, to maximize its profit from the privatized firm, the rent-seeking government chooses $\alpha = 0$. In other words, the rent-seeking government thinks of the SOEs as "cash cows" and tries to exploit them fully to accommodate its financial needs. Moreover, the rent-seeking government also wants to raise the fixed cost a_2 applied to private firms.[28]

Proposition 2 *A government that wants to extract rent from business firms chooses not to privatize profitable SOEs and, at the same time, promotes institutional arrangements and policies that increase the costs to the private firms.*

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[28]This conclusion may change if the managers share some of the rent (e.g., see Vu 2004).

5.3 A Benevolent Government

The benevolent government seeks to maximize the utility of the representative consumer[29] It solves the following problem:

$$\max_{\alpha} U = \frac{(\sigma - 1)^{\frac{\sigma - 1}{\sigma}} \{I + m\alpha[a_2(\alpha) - a_1(\alpha)]\}}{\sigma[a_2(\alpha)]^{\frac{1}{\sigma}}}$$

5.3.1 Case 1: $a_2(\alpha) \equiv a_1(\alpha)$

In this case the government is both benevolent towards the consumer and friendly to the private firms. This type of government wants to remove all privileges of the SOEs and completely level the playing field between the public and private sector. In terms of the model, it sets $a_2(\alpha) = a_1(\alpha)$. To maximize the consumer's utility, the benevolent government needs to minimize the fixed cost of the private firms by reducing obstacles, i.e. by being friendly to the private sector. If we continue to assume that $a_2'(\alpha) < 0$, then to minimize $a_2(\alpha)$ the government sets $\alpha = 1$, i.e. fully privatize the SOE.

Proposition 3 *Under the condition that the public and private firms enjoy equal treatment, the benevolent government chooses to privatize all SOEs completely to maximize the welfare of consumers.*

5.3.2 Case 2: $a_2(\alpha) > a_1(\alpha) \, \forall \, \alpha \in (0, 1)$

For simplicity, assume that $I = 0$ and let $\triangle(\alpha) \equiv a_2(\alpha) - a_1(\alpha)$. The government solves:

$$\max_{\alpha} \frac{\alpha[a_2(\alpha) - a_1(\alpha)]}{[a_2(\alpha)]^{\frac{1}{\sigma}}} = \frac{\alpha\triangle(\alpha)}{[a_2(\alpha)]^{\frac{1}{\sigma}}}$$

If we assume an interior solution, then after manipulating the FOC, we find that the optimal degree of privatization α^* is given by:

$$\alpha^* = \frac{\sigma a_2(\alpha^*)\triangle(\alpha^*)}{a_2'(\alpha^*)\triangle(\alpha^*) - \sigma a_2(\alpha^*)\triangle'(\alpha^*)} \tag{22}$$

- **The Relationship Between Privatization and Competition Policy**:

The question of interest in this subsection is the following: "What is the effect of changing the cost gap $\triangle(\alpha)$ on the optimal value α^*?" In other words, we want to sign $\triangle'(\alpha^*)$. From equation (22), we can find the expression for $\triangle'(\alpha)$ as:

$$\triangle'(\alpha^*) = \frac{\triangle(\alpha^*)\left[\dfrac{\alpha}{\sigma}a_2'(\alpha^*) - a_2(\alpha^*)\right]}{\alpha a_2(\alpha^*)} \tag{23}$$

Under mild assumptions: $a_2(\alpha^*) \geq a_1(\alpha^*) > 0$ and $a_2'(\alpha^*) < \dfrac{\sigma a_2(\alpha^*)}{\alpha}$, equation (23) implies that $\triangle'(\alpha^*) < 0$, meaning that as long as the government's public policies are

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consistent (i.e., the government cares about consumer welfare) then a pro-competitive policy consequently leads to a higher degree of privatization.[30] As has been shown in section 5.3.1, if the government removes all privileges of the SOEs and completely levels the playing field between the public and private sectors, full privatization of all the SOEs will follow. In this sense, $\triangle'(\alpha^*) < 0$ implies that competition policy is substitutable for the privatization program.[31]

Proposition 4 *If the government cares about the welfare of consumers, then a competition policy aimed at leveling the playing field between the public and private firms is substitutable for the privatization program.*

In summary, under plausible conditions the extent of unequal treatment of the public and private firms negatively affects the degree of privatization, and therefore the competitiveness of the market in equilibrium. Stiglitz (1998, 1999) advances the idea that if a country cannot proceed with privatization effectively, it can promote competition as a substituting policy to improve economic efficiency. The result of the Proposition 4 confirms Stiglitz's insight. In this context, the result of Proposition 4 can be interpreted as saying that if the government promotes a more equal status between the public and private ownership, then to maximize the consumer's welfare, the benevolent government would choose a higher degree of privatization. In other words, a policy aimed at leveling the playing field, and thereby creating a fair competitive environment between the public and private firms, will promote a more radical privatization program. In this respect Stiglitz is correct. However, as the result of Proposition 2 in Case 1 suggests, he is completely correct only if the government is benevolent and cares about the welfare of consumers.

6   Concluding Remarks

In this paper, we provide a positive theory to address the issue of substitutability and complementarity between privatization and competition policies in Vietnam's transitional economy. Our study is motivated by two groups of studies. The first group consists of studies suggesting that institutions matter greatly and therefore should be incorporated into formal economic models. The second group consists of empirical and theoretical papers that generate opposite findings and predictions about the interaction between privatization and competition policies in transition economies. We attribute this unsettled situation in the literature to the fact that most of the studies abstract from the specific political, economic, institutional, and social context of the studied countries.

Unlike other studies concerned with the relative effects of privatization and competition on the performance of privatized firms, we are interested in the question of how a government combines the two policies so as to achieve its objectives. To answer this question, we use the Dixit-Stiglitz model of monopolistic competition and modify it to capture some particular features of Vietnam, one of the most important features of which is the favored treatment by the government of the public sector because of its socialist ideological bias.

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[30]It is worth emphasizing that in the following, we have not assumed anything about the functional forms of $a_1(\alpha)$ and $a_2(\alpha)$, except that $a_2(\alpha) \geq a_1(\alpha) > 0 \, \forall \, \alpha \in [0,1]$ (i.e., we only keep assumption $A1$ while relaxing assumptions $A2$ and $A3$.)

[31]In contrast, $\triangle'(\alpha^*) > 0$ means that a competition-enhancing policy alone is not enough to result in a higher degree of privatization and a radical privatization program is necessary.

We discuss the various kinds of unequal treatment and note that the resulting higher costs of doing business to private firms as the major sources of anti-competitive restrictions in Vietnam. Accordingly, we define competition policy as the government's decision to reduce the cost gap between the private and public sectors. The critical assumptions that drive the results in this paper are that: (1) The representative consumer exhibits preferences for variety; (2) Private firms are relatively more efficient than public firms in the sense that they face a lower marginal cost; and (3) The government can, at least to some extent, manipulate the cost structures faced by the public, privatized, and private firms. Moreover, it is assumed that the fixed-cost gap between the private and privatized firms is negatively related to the degree of privatization (because the government cares about the profits of the state's share in privatized firms.)

Three results stand out. First, an unfair competition policy causes losses to consumers' welfare, private firms' profit, and the government's budget (because of subsidies given to unprofitable SOEs). These burdens then give rise to an increasing pressure for privatizing inefficient SOEs. Second, although competition and privatization are necessary conditions to improve the efficiency of the SOEs and the consumer welfare, they are not sufficient. And third, we show that the implementation of the competition and privatization policies depends critically on the type (or the objective) of the government. A rent-seeking government that wants to extract rent from business firms chooses not to privatize profitable SOEs and, at the same time, promotes institutional arrangements and policies that put excessive costs on the private firms. In contrast, a market friendly government chooses to privatize all profitable SOEs completely. Finally, if the government is benevolent and cares for the well-being of consumers, the competition policy aimed at leveling the playing field between the public and private firms will be substitutable for the privatization program.

In addressing the main issues of the paper, namely the endogenous demand for a competition-enhancing policy and its relationship with a privatization program, our model has been simplified in several ways. In particular, our model abstracts from the labor market and a complete treatment of the government behavior. We have not considered the labor market because for our analytical purpose it complicates the analysis without adding much insight. However, if one is concerned with the impact of a privatization-enhancing policy on employment (which is a very important policy issue), a complete treatment of labor market is essential.[32] To simplify the analysis, we have also made somewhat ad hoc assumptions about the manner in which the government revenue is spent. Clearly, this potentially affects results of our welfare analysis. This shortcoming of the current paper points to the need of developing a satisfactory theory of the government in transition economies, which we are clearly still lacking.

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[32] Our model (section 4.3) does say something about the impact of a competition-enhancing policy on output and, therefore, on employment. See Blanchard & Giavazzi (2003) for an analysis of the macroeconomic effects of deregulation in both goods and labor markets in Europe. Also, see Aghion & Blanchard (1994) for an excellent analysis of the reallocation of labor from the public sector to the emerging private sector in transition economies.

7 APPENDICES

7.1 Partial and Gradual privatization in Vietnam[33]

Stage 1 (6/1992-4/1996): Voluntary Privatization:

In 1992, the year Vietnam started its pilot privatization program, Vietnam had about 5,800 state-owned enterprises (SOEs). The pilot program was designed to privatize small and medium-size SOEs that satisfied the following three conditions:

1. They were profitable or potentially profitable,

2. They were not strategically important, i.e. the government did not need to maintain 100% state ownership, and

3. The managers and workers in these firms could voluntarily participate in the pilot program. It can be deduced from these criteria that Vietnam is following a two-stage privatization approach in which small SOEs are privatized first, followed by larger SOEs. The results of this pilot program were minimal: in 5 years, from 1992 to 1996, only 5 SOEs were privatized.

Stage 2 (5/1996 - 5/1998): Expansion of the Pilot Program:

In 1996, after evaluating the results of the pilot program, the government decided to expand this program, and for the first time showed a strong commitment to privatization. The first legal framework for privatization in Vietnam was also introduced to facilitate the privatization process. However, once again the results were far below expectations: between 1996 and 1998, only 25 additional SOEs were privatized.

Stage 3 (6/1998 - 5/2002): Acceleration of the Privatization Program

Since June 1998, the experimental program has been replaced by a more ambitious privatization plan in which SOEs are no longer given the option to participate in the privatization program. The government classifies all SOEs into three groups according to their level of importance.

Group 1 consists of public enterprises that are strategically important and should therefore be put under complete state ownership and control. SOEs in this group are not subject to privatization.

Group 2 consists of SOEs in industries that the government wants to keep controlling (or golden) shares if they are privatized.

Group 3 consists of all remaining SOEs, which can be privatized by one of four methods: (1) keeping the state shares intact and issuing new shares (i.e. corporatization); (2) selling part of the state shares; (3) detaching and then privatizing parts of a SOE (mostly applied to the state general corporations); and (4) selling off all state shares to workers and private shareholders (mostly applied to loss-making SOEs). The progress of the privatization program during this stage was more impressive. Between 6/1998 and 5/2002, 845 SOEs were privatized. To summarize, by 5/2002 the Vietnam's government had privatized 875 SOEs, i.e. about 15% of the total number of SOEs, with capital amounting to about 2.5%

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[33]This section is written based on Nguyen, Huy V. (2002), "Equitization and Ownership Diversification of SOEs", in *Proceedings of Post-Equitization in Southern Provinces*, Central Institute for Economic Management, Ministry of Planning and Investment

of the total capital of all SOEs.

Stage 4: Continuing Privatization Program

It was projected that the number of SOEs would fall to 2,000 by the end of 2005, i.e. before Vietnam's participation in the Asian Free Trade Association (AFTA) under full terms and conditions. Given the slow pace of privatization, in 2002 the government decided to jump start the privatization program by issuing Decree No. 64/2002/ND-CP, replacing Decree No. 44/1998/ND-CP, to improve the legal framework for privatization. There are several notable points about this new Decree. First, privatization is further decentralized, with more authority given to line ministries, local government, and the general corporations. Second, compensation funds are created for compensating and retraining dismissed workers and for facilitating privatization. Third, non-strategic SOEs whose capital is under VND 5 billion are threatened with liquidation if they oppose privatization[34]. Fourth, the upper share limit imposed on foreign individuals and organizations is increased from 20

In November 2004, the government issued Decree No. 187/2004/ND-CP, replacing Decree No. 64/2002/ND-CP. This Decree helps overcome problems related to SOE's bad debts (both receivable and payable). More importantly the Decree clears the way for applying market methods to the evaluation of SOEs subject to equitization (e.g., public biddings, and independent - even foreign - audits.)

7.2 Criteria for SOE classification

According to Decision No.58/2002/QD-TTg, dated 26 April 2002, of the Prime Minister, on the criteria for classification of SOEs and SGCs:

1. The State will hold 100% charter capital in two groups of SOEs. The first group consists of SOEs that engage in business activities in domains where the state needs to hold the monopoly position; in key sectors and fields, producing important products. In terms of capital requirements, these SOEs must: (i) have at least VND 20 billion of state capital; (ii) contribute at least VND 3 billion to the state budget annually for 3 consecutive years. As for the economic development role, these SOEs are supposed to be pioneer in applying spearhead advanced technologies and play an important role macro-economic stabilization. As for the economic-political role, these SOEs must ensure to meet the essential demand for production and improve the material and spiritual life of people in rural areas, ethnic minority people in mountainous and remote areas.

The second group are SOEs engaging in public-utility services; enterprises assigned to perform special defense and security tasks; and enterprises located in importantly strategic areas where economic and defense tasks demand.

2. The state will keep major shares in the following SOEs after their equitization: First, SOEs that engage in important business activities, having between VND 10 to 20 billion of state capital, and contributing, in average, at least VND 1 billion to the state budget annually for 3 consecutive years. Second, SOEs that engage in some particular types of public-utility services.

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[34]The credibility of this threat is questionable, however.

3. The state will make decision about the SOEs in which it does not need to hold more than 50% of total shares or special (golden) shares. This decision is based on the specific conditions of each enterprises.

4. The state will not keep major shares but special shares in the SOEs engaging in some important sectors and fields so that it can maintain the control right on important issues.

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Quality Management and Competitive Performance: An Empirical Evidence of Impact of ISO 9000 in Vietnamese Manufacturing Companies

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Abstract

Manufacturing companies in developing countries, irrespective of size or sector, often use ISO 9000 certificate as a route to world-class status. Based on the results of an investigation by interview and questionnaire survey for various manufacturing companies in Vietnam, this paper is aimed to show the present situation of ISO 9000 implementation and performance measurement in those companies. Firstly, we examine the development of ISO 9000 implementation and its relationship with quality performance. The ISO 9000 implementation strategy and the conformance to the standards are discussed in detail. Secondly, we investigate the current situation of performance measurement system and analyze the relationship between ISO 9000 implementation and changes in performance measurement. The regression models are estimated to evaluate the contribution of ISO 9000 to improving company performance and performance measurement system. The study found out that ISO 9000 has a positive impact on quality performance and the structure of performance measurement system. Finally, the recommendations for further deployment of ISO 9000 are discussed. ISO 9000 could be used not only as one of quality management and improvement tools but also as a framework for performance measurement.

1.   Introduction

In the recent years, the business competitiveness has been changed dramatically. Companies began to lose market share to overseas competitors who were able to provide higher-quality products with lower costs and more variety. To regain a competitive edge companies not only shifted their strategic priorities from low-cost production to quality, flexibility, short lead time and dependable delivery, but also implemented new technologies and philosophies of production management such as computer integrated manufacturing (CIM), flexible manufacturing systems (FMS), just in time (JIT), optimized production technology (OPT) and total quality management (TQM)…In this circumstance, the implementation of quality management system is becoming more and more critical for enhancing competitiveness.

The ISO 9000 implementation has been accepted worldwide as a useful first step towards Total Quality Management (TQM) and since it's establish in 1987 until now, the number of organizational that has been certified is growing continuously. The implementation

of ISO 9000 is a critical organizational change that requires a transformation in the organization's processes, strategic priorities, and culture, among others. This study examines the current situation of ISO 9000 implementation and its impacts on quality performance and performance measurement system. This study can be very useful to organization, especially the manufacturers in developing country, which attempt to identify factor of management system in order to improve competitiveness.

2.   Research Objectives

The research is aimed to study the present situation of ISO 9000 implementation and performance measurement in manufacturing companies in Vietnam The research is focusing in on the relationship between the implementation of ISO 9000 quality management system standard and company's performance measurement in order to find out the critical factor for implementation of performance measurement in the industry. The main issues of research are

To examine the influence of ISO 9000 implementation to quality performance, and to examine the influence of ISO 9000 implementation to performance measurement. The aim of research is to find out the change in utilization of performance measurement and the trend of selecting measures after implementing ISO 9000.

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3.   Background Literature

3.1.   ISO 9000 Standard

The term *ISO 9000* refers to a set of quality management standards. ISO 9000 version 2000 consists of 4 standards with the main one is ISO 9001:2000. About 500 000 organization in over 140 countries have already adopted ISO 9000 because it help organizations achieve standards of quality that are recognized and respected throughout the world [11]. The ISO 9000 standards are based on eight quality management principles listed below:

Customer focus: Organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations.

Leadership: Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives.

Involvement of people: People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit.

Process approach: A desired result is achieved more efficiently when activities and related resources are managed as a process.

System approach: Identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives.

Continual improvement: Continual improvement of the organization's overall performance should be a permanent objective of the organization.

Factual approach to decision making: Effective decisions are based on the analysis of data and information.

Mutually beneficial supplier relationships: An organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value.

Implementing ISO 9000 helps organizations to manage their processes with quality. Without quality system, organizations cannot achieve a world-class standard of quality. The structure of ISO 9001 reflects Plan-Do-Check-Action Deming cycle. The ISO 9001:2000 standard consists of 4 sets of systematic requirement like "Management responsibility", "Resource management", "Product realization", "Monitoring, analysis and improvement" as describe in Figure 1 [8].

The clauses of "Management responsibility" require company to set up, deploy and maintain a set of quality objectives that in line with company strategy and quality policies (5.2&5.3&5.4). Company has to stipulate the roles and responsibility for each function (5.5). The Quality Management Responsibility (5.5) function also has been emphasized as an important factor for quality management system.

The clause of "Resource management" refers to the requirement about education and training for employee (6.2) in order to improve their awareness and skills. It also mentions about ensuring working environment (6.3).
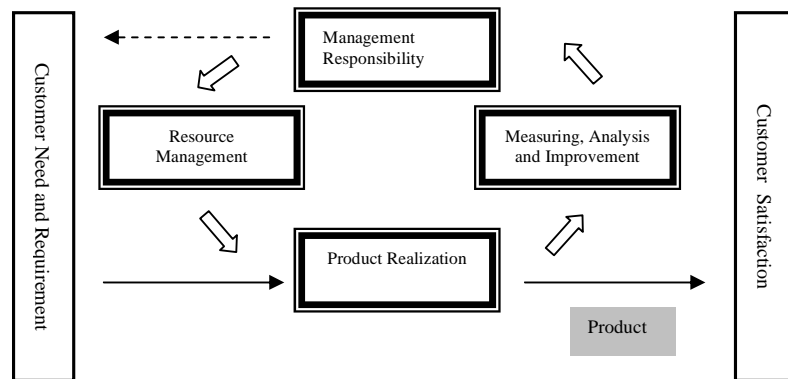
Figure 1: The model of ISO 9001:2000 Quality Management System

The clauses of "Product realization" give strong emphasis in control production and operation processes: the realization processes (7.1), customer communication including the identification of customer requirements (7.2.1); design and/or development changes (7.3.7); identification of regulatory and legal requirements (7.3.2.d); the criteria for selection and periodic evaluation of suppliers (7.4.1); validation of processes (7.5.5).

The clauses of "Monitoring, analysis and improvement" focus in measurement of organization performance (both product and process). It includes Internal audit (8.2.2), Control of nonconformity (8.3), Measuring and monitoring of processes (8.2.3 & 8.2.4), the planning for continual improvement of the quality management system (8.5.1), Corrective and preventive action (8.5.2 &8.5.3).

3.2. Performance Measurement

In business, performance measurement is a series of tools, methods, activities and system used to evaluate company performance.

The target of business is to satisfy their customers with greater efficiency and effectiveness than their competitors. The measurement of business performance is used in both perspectives of performance: efficiency and effectiveness. The term of effectiveness refers to the extent to which customer requirements are met, while efficiency is a measure of

how economically the firm's resources are utilized when providing a given level of customer satisfaction. In brief, the basic concepts can be summarized as followed [1]:

Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of action

A *performance measure* can be defined as a metric used to quantify the efficiency and/or effectiveness of an action

A *performance measurement system* can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions

The performance measure in production could be listed as follows:

Quality-based measure: product conformance, features, reliability, perceived quality, serviceability, technical durability

Time-based measure: manufacturing lead time, deliver lead time, due-date performance, frequency of delivery

Cost- based measure: production cost, service cost, value added, and selling price

Flexibility based measure: new product introduction, deliverability, volume, resource mix

The development of performance measurement can be divided into 2 phases. The first phase began in the late 1880s and went through the 1980s. In this phase the emphasis was on financial measures such as profit, return on investment and productivity. One of the well-know methods was formulated by Du Pont (1903) measure return on investment and used to access both the efficiency of each business unit [2].

The second phase started in the late 1980s as a result of changes in the world market. Neely *et al* (1992) indicated the most changes in business performance measure as

- ✓ The changing nature of work (reducing of labor cost)
- ✓ Increasing competition (company must be differentiated with competitor)
- ✓ National and international awards (requires company to complete self assessment)
- ✓ Changing organizational roles (humane resource management and development play more active role in business performance)
- ✓ Changing external demands (company must be opened to the public)
- ✓ The role of information technology [1].

The changes revealed that traditional performance measures have many limitations and the development of new performance measurement systems is required for success [1]. McNair *et al.* (1990) developed a conceptual model, which they called the Performance Pyramid.

Table 1: Difference between Traditional and New Performance Measures
Ghalayini and Noble (1996) [1]

Traditional performance measures	Non-traditional performance measures
Based on outdated traditional accounting system	Based on company strategy
Mainly financial measures	Mainly non-financial measures
Intended for middle and high managers	Intended for all employees
Lagging metrics (weekly or monthly)	On-time metrics (hourly, or daily)
Lead to employee frustration	Lead to employee satisfaction
Neglected at the shop-floor	Frequently used at the shop-floor
Have a fixed format	Have no fixed format (depends on needs)
Do not vary between locations	Vary between locations
Do not change over time	Change over time as the need change
Intended mainly for monitoring performance	Intended to improve performance
Not applicable for new advances technology and method JIT, TQM, CIM, FMS, etc.	Applicable for new advances technology and method JIT, TQM, CIM, FMS, etc.
Ignoring continuous improvement	Help in achieving continuous improvement

Fitzgerald *et al* (1991) developed a framework of performance measurement with two basic types, one is relating with result (competitiveness and financial performance) and the other is relating with determinant of the result (quality, flexibility, resource utilization, innovation) [5].

Leaving the traditional performance measure, Kaplan and Norton (1992) developed the new balanced, multi-dimension method which is aim to create a true system of performance measurement which links the company's long-term strategy with its day-to-day operations [7]. In the Kaplan and Norton model of the Balanced Scorecard, measures are different perspectives reflecting the important dimension of the company's business. The following four perspectives are used in the model:

Financial perspective: Reflects the financial return to the owners (How do we look to our shareholders?)

Customer perspective: Reflects how customers view our business (How do our customers see us?)

Business-process perspective: Reflects what we must be good at (What must we excel at?)

The innovation and learning perspective: Reflects how we are to do continue and develop (How can we continue to improve and create value?)

To sum up this section, it is interesting to notice the difference between the traditional and new performance measures as described by Ghalayini and Noble (1996) in Table 1[1].

4. Research Framework

The main target of ISO 9000 is to help company to set up and maintain a quality-oriented management system. Implementing ISO 9000, company needs to develop and maintain quality policy, quality objectives in all appropriate level and many operational documented procedures require company to settle down a system and mechanism to tracking company performance [10]. The measuring, testing, auditing activities have been carried out to ensure the effectiveness and efficiency of the system. To obtain and maintain ISO 9000 certificate, an organization's quality system must be measured against the requirements of the ISO 9001:2000 standards by itself or by a certification body. In this circumstance, the

research examines the change of quality performance and performance measurement after implementing ISO 9000. There were many researches about the benefit and effectiveness of ISO 9000 implementation. Yann [12] tried to evaluate ISO 9000 implementation by evaluating 6 main impacts in quality management system. Clare [3] used 17 indexes to evaluate the benefit of ISO 9000 certification. This research consider ISO 9000 implementation as a conformance of 4 main managerial requirements, name "Management Responsibility", "Resource Management", "Product Realization", "Measuring, analysis and improvement". Those 4 parts are 4 main components of ISO 9001:2000 quality management system that describe in Figure 1.

The first issue of this research is to investigate relationship between ISO 9000 implementation and company performance in term of improvement of quality performance. Neely et al. [2] summarized quality-based performance in a set of 10 measures concerning fixture, duration…In this research the measure for quality performance is defined by 5 criteria like incoming quality, in-process quality, final product quality, on-time delivery, solving customer complaint. They are the most measures that are widely used in the manufacturing companies as indicators of quality performance of production activities.
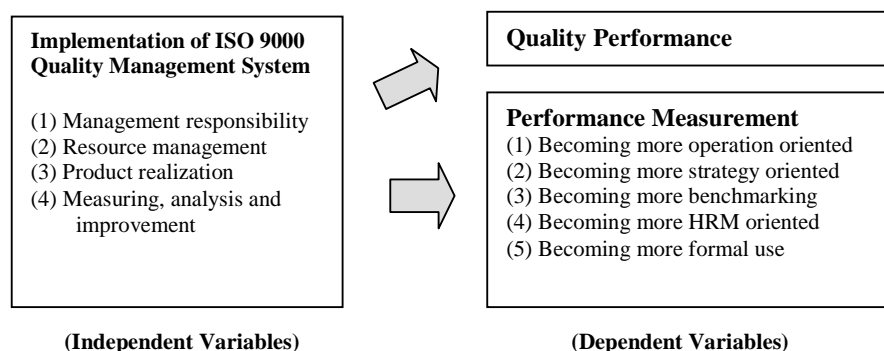
Figure 2: Research Framework

The second issue of this research is to investigate relationship between ISO 9000 implementation and the change in utilization of performance measurement. Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of action [2]. De Tony *et al.* summarized the general utilization of performance measurement in 3 categories such as planning, controlling and coordination activity; control, evaluation and involvement of humane resources; benchmarking [5]. In this research, the change in utilization of performance measurement is assumed that after ISO 9000 implementation, performance measurement is becoming

- More support the planning, controlling, and coordinating the operational activities (such as quality management, supply chain management, production management, inventory control…). This change can be named as "Becoming more operation oriented".

- Delivered from strategy, long term plan and it supports the strategic deployment and enhancing the competitiveness. This change can be named as "Becoming more strategy oriented".

- More support the Benchmarking process. This change can be named as "Becoming more Benchmarking oriented".

- More supporting the planning, controlling, and coordinating of Human Resource Management. This change can be named as "Becoming more HRM oriented".

- More standardized, periodically carried out, frequently updated and feed backed to the employee. This change can be named as "Becoming more formal deployment".

5.   Questionnaire and Data Collection

The questionnaire was formulated after a comprehensive review of the literature of general management control and performance measurement. The purpose was to draft a questionnaire that would cover many of the central issues relating business performance. The survey consists of three parts referring relationship between quality management and performance measurement.

Firstly, we examine the influence of ISO 9000 implementation on company quality performance. The companies provide the information concerning "Self evaluated status of ISO 9000 implementation based on results of certification audit, surveillance audits, and internal audits". Ranking in 5 point-scales from "Not complied with ISO 9001:2000 standard at all" (1) to "Fully complied with ISO 9001:2000 standard"(5). Next, the companies have been asked about "How the implementation of ISO 9000 did give the improvement to quality performance". The index for quality performance can be broken down into 5 indexes as incoming quality, in-process quality, final product quality, on-time delivery, solving customer complaint. The ranking in 5 point-scales from "Not improved at all" (1) to "Strongly improved" (5).

Secondly, the survey is to examine the influence of ISO 9000 implementation on performance measurement. The influence of ISO 9000 on performance measurement system is considered in possible five impacts concerning with the change in utilization of performance measurement. The company had been asked about the "Change in utilization of performance measurement after implementing ISO 9000". Ranking is in 5 point-scales from "Strongly disagreed" (1) to "Strongly agreed" (5).

Thirdly, the survey examines the change in utilization of performance measurement after ISO 9000 implementation. A set of 32 measures, which has been formulated based Balanced Scorecard approach, has been examined to know the real application of performance measure in companies. The company had been asked about the frequency of use for each measure before and after ISO 9000. Ranking is in 5 point-scales from "Not used at all" (1) to "Most frequently used" (5). The questionnaire is expected to be answered by top managers of companies.

Regarding the economy development and situation of transition period to market oriented economy, Vietnam cases have been adopted in order to get the data supporting the survey. The target group of this survey is Vietnam manufacturing industries that has been already implemented and certified ISO 9000 standard in the past 5 year. The ISO 9000 standards have been first introduced in Vietnam in 1995. By December of 2004, there were nearly 2000 Vietnam companies already certified ISO 9000 [11]. Among of them 90% is manufacturing companies.

The questionnaire has been delivered to 400 manufacturing companies in Vietnam. With the supporting from Vietnam Productivity Center (VPC), the questionnaire has dispatched in December of 2004, and there were 148 feedbacks with the response rate at 37%. Finally, 125 responses have been considered in this study. The demographics of respondent companies can be described in Table 2. About 15% of responses were answered by top managers (executive

director, president), 82% were answered by Quality Management Representative (member of Board of Director).

Table 2: Demographics of Respondents

Classify by type of production			Number	%
Mechanical manufacturing (machinery, motorcycle, automobile)			32	25.6
Electronic manufacturing (home appliance, IT, telecommunication devices)			35	28
Chemical manufacturing (plastic, construction material, gas)			23	18.4
Textile and Garment			18	14.4
Food processing (livestock, seafood, liquor)			17	13.6
Classify by ownership	**Number**	**%**	**Classify by company size**	**Number**	**%**
State owned	43	34.4	Under 100 employees	12	9.6
Private	47	37.6	Between 100-500 employees	61	48.8
Joint-venture	21	16.8	Between 500-1000 employees	33	26.4
Foreigner investment	14	11.2	Above 1000 employees	19	15.2

6. ISO 9000 and Quality Performance

6.1. Development of ISO 9000 Implementation in Vietnam

The quality management system started introduced in Vietnam since 1995. Since the year 1999, along with the development of Vietnam industry and the integration to the global economy, number of ISO 9000 certificates that awarding to the industry is continuously increased. By end 2004, it is estimated that around 2000 companies already certified ISO 9000 by local and international certification bodies. Because of the requirements of customers and markets, the local manufacturers and service providers have to implement ISO 9000 for better product quality and matching customer requirement.
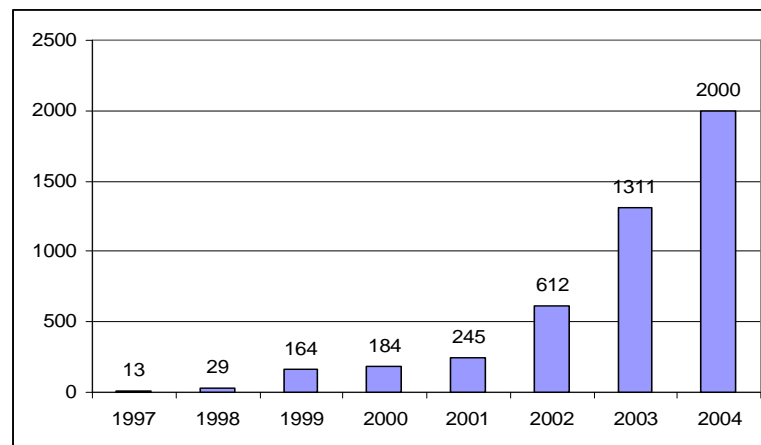
Figure 3: Development of ISO 9000 certificates in Vietnam (Source: 13rd.survey ISO [1])

The interview with company's quality manager show that, the lead-times for getting ISO 9000 certificate is around 10 to 12 months with the most time is spending for developing quality procedures. The typical process of implementing ISO 9000 is described in the figure 4. Generally, companies take from 4 to 6 months for writing operational procedures and quality manual. In practice, this quality management system document has been established normally

three or four months before certification audit. Around 10-15% of workforce is participating in ISO 9000 project and around 95% of middle manager has been trained for ISO 9000 awareness and methodology.

Forming up the steering committee

Current situation investigation

System design and Planning

ISO Training

Documenting → Application of documentation system

Internal Audit

Corrective and preventive action

Management Review

Certificate audit

Figure 4: Typical steps of ISO 9000 implementation

In order to quantitative assessment the situation of ISO 9000 implementation in the industries, this research tries to utilize the scale to measure the conformance to ISO 9000 requirements. The status of ISO 9000 implementation can be presented by breaking down four main elements of ISO 9000 quality management system (Figure 1). ISO 9000 can be itemized in to fifteen indexes that are delivered from the requirement of ISO 9001:2000 standard as follows:

Management responsibility consists of three indexes: Quality planning (QPL), Responsibility and authority (RAA) and Quality Management Representative (QMR).

Resource management consists of two indexes: Education and training (EAT) and Working environment and safety (WES).

Product realization consists of six indexes: Contract review (CRV), Design control (DCL), Product standardization (PST), Supplier control (SCL), Process control (PCL), Storage and handling (SAH).
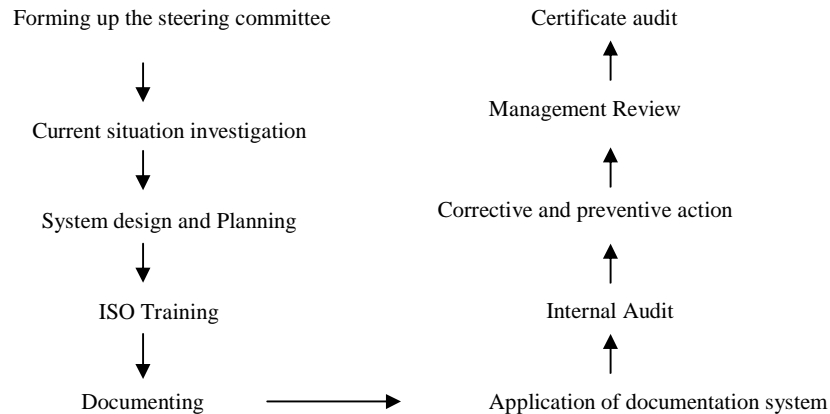
Measuring, analysis and improvement consist of four indexes: Measuring and monitoring (MAM), Nonconformity control (NCC), Analysis of data (AOD) and Improvement (IMP). Totally, fifteen indexes can present for situation of implementing ISO 9000.

Gathering from the survey, Table 3 reflects the conformance to ISO 9000 requirements classify by industries and business ownership. Comparing with ISO 9000 requirement, the most complied and implemented are "Responsibility and authority (RAA)", "Product standardization (PCL)", "Process control (PCL)". The least complied indexes are "Working environment and safety (WES)", "Storage and handling (SAH)", "Improvement (IMP)" and "Analyzing of data (AOD)".

For in-dept analysis, we can classify the survey responses by production type and ownership. It is interesting to note that in all 5 groups, the conformance to ISO 9000 is generally obtained, in term of "Responsibility and authority (RAA)", "Product standardization (PST)". Using a huge quantity of employee, the textile & garment and food processing companies get the significant conformances about the "Education and Training (EAT)" and "Product standardization (PST)". However, some lacks of conformance are also identified. For example, chemical industry got lower score in term of "Working environment and safety

(WES)", the control measures to supplier (SCL) of food processing companies is not sufficient. The textile & garment production got high score in process control (PCL) but less score in Design control (DCL) and Quality planning (QPL).

Table 3: Implementation of ISO 9000 and Quality Performance

		ISO 9000 Implementation (5 point scale)															Quality performance (5 point scale)				
		Management responsibility			Resource management			Product realization					Measuring, Analysis and Improvement								
		QPL	RAA	QMR	EAT	WES	CRV	DCL	PST	SCL	PCL	SAH	MAM	NCC	AOD	IMP	ICQ	IPQ	FPQ	OTD	SCC
	$\overline{X}$	3.94	4.31	3.61	4.05	3.53	4.20	3.86	4.31	4.09	4.3	3.57	4.1	4.38	3.54	3.45	3.64	4.26	4.37	4.33	4.61
	S	0.52	0.51	0.58	0.55	0.5	0.4	0.52	0.55	0.68	0.53	0.54	0.38	0.56	0.55	0.53	0.48	0.44	0.48	0.52	0.49
Mechanical	$\overline{X}$	3.90	4.29	3.74	4.00	3.48	4.16	3.87	4.26	4.13	4.29	3.55	4.06	4.42	3.55	3.48	3.61	4.19	4.32	4.26	4.61
	S	0.40	0.53	0.51	0.52	0.51	0.37	0.50	0.58	0.67	0.46	0.57	0.36	0.50	0.57	0.51	0.50	0.40	0.48	0.51	0.50
Electronic	$\overline{X}$	3.92	4.33	3.64	4.00	3.47	4.22	3.83	4.28	4.17	4.31	3.56	4.11	4.39	3.58	3.47	3.61	4.25	4.36	4.31	4.64
	S	0.55	0.53	0.59	0.53	0.51	0.42	0.51	0.61	0.65	0.52	0.56	0.40	0.49	0.55	0.51	0.49	0.44	0.49	0.52	0.49
Chemical	$\overline{X}$	3.96	4.22	3.61	4.00	3.48	4.17	4.00	4.30	4.17	4.26	3.52	4.04	4.26	3.57	3.43	3.65	4.17	4.39	4.30	4.61
	S	0.37	0.52	0.50	0.43	0.51	0.39	0.43	0.47	0.72	0.54	0.51	0.37	0.62	0.59	0.51	0.49	0.39	0.50	0.47	0.50
Textile and Garment	$\overline{X}$	3.78	4.50	3.56	4.11	3.56	4.22	3.61	4.39	4.22	4.39	3.50	4.11	4.28	3.61	3.50	3.56	4.39	4.39	4.39	4.72
	S	0.65	0.51	0.62	0.76	0.51	0.43	0.61	0.50	0.55	0.50	0.62	0.32	0.67	0.50	0.51	0.51	0.50	0.50	0.61	0.46
Food processing	$\overline{X}$	4.18	4.24	3.35	4.24	3.76	4.24	3.94	4.41	3.59	4.29	3.76	4.24	4.53	3.35	3.29	3.82	4.41	4.41	4.47	4.41
	S	0.64	0.44	0.70	0.56	0.44	0.44	0.56	0.51	0.71	0.69	0.44	0.44	0.62	0.49	0.69	0.39	0.51	0.51	0.51	0.51
Foreigner	$\overline{X}$	4.07	4.21	3.93	4.00	3.50	4.14	4.14	4.36	4.36	4.29	3.71	4.00	4.50	3.57	3.57	3.86	4.21	4.43	4.36	4.71
	S	0.27	0.43	0.27	0.00	0.52	0.36	0.36	0.50	0.63	0.47	0.47	0.39	0.52	0.65	0.51	0.36	0.43	0.51	0.50	0.47
Joint Venture	$\overline{X}$	4.00	4.38	3.71	4.05	3.57	4.29	3.81	4.29	4.19	4.33	3.67	4.14	4.43	3.67	3.52	3.76	4.38	4.33	4.33	4.67
	S	0.45	0.50	0.56	0.50	0.51	0.46	0.51	0.64	0.51	0.58	0.58	0.36	0.51	0.48	0.51	0.44	0.50	0.48	0.48	0.48
State owned	$\overline{X}$	3.86	4.30	3.56	4.00	3.47	4.19	3.81	4.33	4.12	4.28	3.47	4.09	4.23	3.56	3.42	3.53	4.19	4.35	4.26	4.58
	S	0.52	0.56	0.59	0.58	0.50	0.39	0.50	0.52	0.70	0.50	0.55	0.37	0.57	0.55	0.50	0.50	0.39	0.48	0.54	0.50
Private	$\overline{X}$	3.94	4.32	3.51	4.11	3.57	4.19	3.83	4.30	3.94	4.32	3.57	4.13	4.45	3.47	3.40	3.62	4.30	4.38	4.38	4.57
	S	0.60	0.52	0.62	0.63	0.50	0.40	0.56	0.55	0.73	0.56	0.54	0.40	0.58	0.55	0.58	0.49	0.46	0.49	0.53	0.50

Classifying the respondent by business ownership, the degrees of conformances to ISO 9000 are almost the same in 4 sectors: foreigner, joint venture, and state owned and private industries. However, in term of "Quality planning (QPL)", "Design control (DCL)" and "Supplier control (SCL)", the foreigner-invested industries get a bit higher score than local industries. Despite of rather short business development history, the private sector shows its potential capability to strengthen its competitiveness by its conformance to ISO 9000, especially in term of "Process control (PCL)" and "Education and Training (EAT)".

6.2. The influence of ISO 9000 Implementation on Quality Performance

As mentioned early, the situation of ISO 9000 can be presented by fifteen measure extracting from requirement of ISO 9001:2000 standard. In this research, the evaluation of quality performance is composed from five indexes like Incoming quality (ICQ), In-process quality (IPQ), Final product quality (FPQ), On-time delivery (OTD), Solving customer complaint (SCC).

$$Y_0 = \alpha_0 + \beta_0\ QLP + \beta_1\ RAA + \beta_2\ QMR + \beta_3\ EAT + \beta_4\ WES + \beta_5\ CRV + \beta_6\ DLC + \beta_7\ PST + \beta_8\ SLC + \beta_9\ PCL + \beta_{10}\ SAH + \beta_{11}\ MAM + \beta_{12}\ NCC + \beta_{13}\ AOD + \beta_{14}\ IMP \qquad (1)$$

The relationship between ISO 9000 implementation and quality performance could be evaluated by regression model with quality performance (Y_0) is dependent variable. The quality performance can be considered as a compositor of five popular indicators for manufactures: incoming quality, in-process quality, final product quality, on-time delivery, and solving customer complaint. The independent variables are fifteen indexes of ISO 9000 requirement that mentioned above

The total number of observations is 125 and the significant level of testing is set 95%. Testing for significance of the multiple regression models, the obtained F-value (with 15 and 110 degree of freedom) is 51. Because F=51 is larger than F (15,110) = 1.83, the conclusion is that at least one of fifteen independent variables is related to quality performance.

For each multiple regression coefficient, its estimate and t-value are showed in Table 4 with insignificant coefficients presented in italic. The conclusion is that there are significant between each independent variables (except DCL, PCL, SAH) and quality performance

6.3. ISO 9000 Implementation, Quality Performance and Extension to TQM

During the survey, the companies have been asked if (1) they had post-ISO 9000 plan and already deployed actions towards TQM (such as Quality Control Cycle QCC, Japanese 5S, Kaizen, Suggestion scheme, Statistical Process Control...) or (2) just would like stay at ISO 9000 certification and have no plan or action for extension to TQM. The respondents show that there were 90 companies responded for first option and 35 companies responded for second option. The first group can be named as "Extension to TQM group" and second group can be named as "No-extension to TQM group".

The Table 5 shows the situation of ISO 9000 implementation and quality performance of the companies dividing by their decision in extension to TQM.

In term of conformance to ISO 9000, data (with one way ANOVA test) show that the significant difference between two groups is not so large. They obtained almost the same conformance to ISO 9000 requirement. Comparing mean, the companies that extent to TQM have bit higher score about "Quality planning (QPL)", "Quality Management Representative (QMR)", "Education and Training (EAT)" and "Analysis of data (AOD)".

Regarding quality performance, the "Extension to TQM group" also has higher score in "Final product quality (FPQ)", "Ontime delivery (OTD)" and "Solving customer complaint (SCC)". Based on gathered data, we can conclude that the positive achievement in implementing ISO 9000 might be a motivation for further extension to TQM

7. ISO 9000 Implementation and Performance Measurement

7.1. The change in Utilization of Performance Measurement after ISO 9000 Implementation

The result of survey shows that almost changes in practice of performance measurement after ISO 9000 implementation are positive (Table 6). Among the predicted changes, the most positive change is "Becoming more operation oriented", "Becoming more formal deployment", the least change is "Becoming more HRM oriented".

7.2. The influence of ISO 9000 on Utilization of Performance Measurement

The relationship between ISO 9000 implementation and performance measurement is evaluated by developing five regression models, which describe five possible impacts of ISO 9000 implementation upon utilization of performance measurement:

$$Y_1 = \alpha_1 + \delta_0\,QLP + \delta_1\,RAA + \delta_2\,QMR + \delta_3\,EAT + \delta_4\,WES + \delta_5\,CRV + \delta_6\,\beta_6\,DLC + \delta_7\,PST + \delta_8\,SCL$$
$$+ \delta_9\,PCL + \delta_{10}\,ASH + \delta_{11}\,MAM + \delta_{12}\,NCC + \delta_{13}\,AOD + \delta_{14}\,IMP \qquad (2)$$

$$Y_2 = \alpha_2 + \gamma_0\,QLP + \gamma_1\,RAA + \gamma_2\,QMR + \gamma_3\,EAT + \gamma_4\,WES + \gamma_5\,CRV + \gamma_6\,DLC + \gamma_7\,PST + \gamma_8\,SCL + \gamma_9\,PCL$$
$$+ \gamma_{10}\,ASH + \gamma_{11}\,MAM + \gamma_{12}\,NCC + \gamma_{13}\,AOD + \gamma_{14}\,IMP \qquad (3)$$

$$Y_3 = \alpha_3 + \Omega_0\,QLP + \Omega_1\,RAA + \Omega_2\,QMR + \Omega_3\,EAT + \Omega_4\,WES + \Omega_5\,CRV + \Omega_6\,DLC + \Omega_7\,PST + \Omega_8\,SCL$$
$$+ \Omega_9\,PCL + \Omega_{10}\,ASH + \Omega_{11}\,MAM + \Omega_{12}\,NCC + \Omega_{13}\,AOD + \Omega_{14}\,IMP \qquad (4)$$

$$Y_4 = \alpha_4 + \varepsilon_0\,QLP + \varepsilon_1\,RAA + \varepsilon_2\,QMR + \varepsilon_3\,EAT + \varepsilon_4\,WES + \varepsilon_5\,CRV + \varepsilon_6\,DLC + \varepsilon_7\,PST + \varepsilon_8\,SCL + \varepsilon_9\,PCL$$
$$+ \varepsilon_{10}\,ASH + \varepsilon_{11}\,MAM + \varepsilon_{12}\,NCC + \varepsilon_{13}\,AOD + \varepsilon_{14}\,IMP \qquad (5)$$

$$Y_5 = \alpha_5 + \varphi_0\,QLP + \varphi_1\,RAA + \varphi_2\,QMR + \varphi_3\,EAT + \varphi_4\,WES + \varphi_5\,CRV + \varphi_6\,DLC + \varphi_7\,PST + \varphi_8\,SCL$$
$$+ \varphi_9\,PCL + \varphi_{10}\,ASH + \varphi_{11}\,MAM + \varphi_{12}\,NCC + \varphi_{13}\,AOD + \varphi_{14}\,IMP \qquad (6)$$

Testing for significance of multiple regression model (F test), the result is showed in Table 8, the obtained F-values of all the five models (with 15 and 110 degree of freedom) is more than $F_{(15,120)} = 1.83$, then we can conclude that at least one of the independent variables is related to each of five possible changes in utilization of performance measurement.

Table 4: Testing Relationship between ISO 9000, Quality Performance and Change in Utilization of Performance Measurement

	Y_0		Y_1		Y_2		Y_3		Y_4		Y_5	
Adjusted R square	0.86		0.54		0.49		0.30		0.37		0.58	
F	50.10		10.60		9.10		4.60		5.90		12.40	
	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t	Coefficient	t
QPL	0.21	4.43	-0.23	-2.35	0.32	3.48	0.33	2.96	0.25	2.08	0.20	2.29
RAA	0.11	2.12	-0.18	-1.66	0.06	0.62	-0.01	-0.09	0.27	2.00	0.06	0.58
QMR	0.15	3.49	0.07	0.79	0.12	1.54	0.03	0.33	0.15	1.46	0.19	2.57
EAT	0.12	2.57	0.17	1.84	0.04	0.53	0.02	0.24	0.31	2.85	0.20	2.46
WES	0.12	2.89	-0.09	-0.97	0.02	0.26	-0.18	-1.85	0.27	2.49	0.07	0.92
CRV	0.10	2.62	0.16	1.44	0.13	1.27	0.13	1.08	0.05	0.40	0.15	1.53
DCL	0.04	1.02	0.10	1.23	-0.03	-0.39	-0.06	-0.64	-0.17	-1.70	-0.08	-1.03
PST	0.11	2.34	0.13	1.34	0.00	-0.04	-0.12	-1.12	0.21	1.78	0.09	1.02
SCL	0.13	3.41	0.03	0.53	0.05	0.93	0.06	0.95	-0.07	-0.93	0.01	0.16
PCL	0.06	1.34	0.24	2.69	0.06	0.70	0.10	1.01	-0.18	-1.69	-0.07	-0.85
SAH	0.05	1.33	0.20	2.46	0.03	0.46	0.16	1.75	0.02	0.16	0.00	0.06
MAM	0.09	2.57	0.12	1.14	0.16	1.66	0.07	0.62	0.00	-0.04	0.17	1.85
NCC	0.13	2.38	0.31	2.86	0.02	0.23	0.09	0.78	-0.04	-0.28	0.09	0.96
AOD	0.09	2.14	0.14	1.66	0.18	2.41	0.16	1.70	-0.11	-1.12	0.14	1.90
IMP	0.16	3.78	0.25	2.79	0.19	2.31	0.18	1.81	0.13	1.22	0.23	2.86

Table 5: ISO 9000 Implementation, Quality Performance and Extension to TQM

Group		ISO 9000 Implementation (5 point scale)															Quality performance (5 point scale)				
		QPL	RAA	QMR	EAT	WES	CRV	DCL	PST	SCL	PCL	SAH	MAM	NCC	AOD	IMP	ICQ	IPQ	FPQ	OTD	SCC
(1) Extension to TQM	$\overline{X}$	4.00	4.30	3.69	4.12	3.58	4.21	3.91	4.34	4.13	4.29	3.57	4.09	4.42	3.61	3.46	3.68	4.30	4.43	4.40	4.69
	S	0.42	0.48	0.59	0.52	0.50	0.41	0.53	0.56	0.67	0.55	0.50	0.39	0.58	0.53	0.54	0.47	0.46	0.50	0.56	0.47
(2) No-extension TQM	$\overline{X}$	3.77	4.34	3.40	3.86	3.40	4.17	3.71	4.23	3.97	4.34	3.57	4.14	4.26	3.37	3.43	3.54	4.17	4.20	4.14	4.40
	S	0.69	0.59	0.50	0.60	0.50	0.38	0.46	0.49	0.71	0.48	0.65	0.36	0.51	0.55	0.50	0.51	0.38	0.41	0.36	0.50

ANOVA test with all $p < 0.05$
Index with no significant difference is presented in italic

For each multiple regression coefficient, its estimate and t-value are showed in Table 4 with insignificant coefficients presented in italic. The final relationship between ISO 9000 implementation and changes in utilization of performance measurement shows in Table 7. The most influential factor of ISO 9000 is "Quality planning (QPL)". The implementation of ISO 9000 requirements such as "Quality planning (QPL)", "Analysis of Data (AOD)", and "Improvement (IMP)" make company's performance measurement becomes more strategy oriented. . Also, requirements about quality planning make companies the opportunity to benchmark with others partner and competitors.

Table 6: Change in Utilization of Performance Measurement

Change in utilization of performance measurement	Meaning of change	Degree of change
Becoming more operation oriented (Y_1)	Performance measurement is supporting the planning, controlling, coordinating the operational activities	**4.39**
Becoming more strategy oriented (Y_2)	Performance measurement is delivered from strategy, long term plan and it supports the strategic deployment and enhancing the competitiveness	**4.02**
Becoming more benchmarking oriented (Y_3)	Performance measurement is supporting the benchmarking process	**3.88**
Becoming more HRM oriented (Y_4)	Performance measurement is supporting the planning, controlling, coordinating of Human Resource Management	**3.66**
Becoming more formal deployment (Y_5)	Performance measurement is more standardized, periodically carried out, frequently updated and feed back to the employee	**4.11**

5 points scale [1]:"Strongly disagreed", [5]:"Strongly agreed"

Requirements of Resource Management (EAT and WES) is giving the impact in change for "Becoming more HRM oriented". Finally, the closed loop of "Quality planning (QPL)", "Education and Training (EAT)", "Improvement by corrective and preventive action (IMP)" under leadership of Quality Management Representative, is make performance measurement system becomes more formal. Means, performance measurement is more standardized, periodically carried out, frequently updated and feed back to the employee.

Testing for the correlation coefficients between dependent variables shows that there are no negative relationships between dependent variables.

Table 7: Relationships between ISO 9000 & quality performance and between ISO 9000 & Change in Utilization of Performance Measurement

	QPL	RAA	QMR	EAT	WES	CRV	DCL	PST	SPL	PCL	SAH	MAM	NCC	AOD	IMP
Quality performance	+	+	+	+	+	+		+	+			+	+	+	+
Performance measure becoming more operation oriented	-									+	+	+			+
Performance measure becoming more strategy oriented	+													+	+
Performance measure becoming more benchmarking oriented	+														
Performance measure becoming more HRM oriented	+	+		+	+										
Performance measure becoming more formal deployment	+		+	+											+

7.3.   Changing in Structure of Performance Measures

A set of Balanced Scorecard-based 32 performance measures has been examined in order to know the main changes in the structure of performance measures after ISO 9000 implementation. The result shows that structure of performance measurement almost changed

after ISO 9000 implementation (see Table 8). Conducting the ANOVA help us to realize that there is no significant change in seven measures such as "Revenue (RE)", "Profitability (PR)", "Economic value Added (VA)", "Product cycle time (CT)", "Resource utilization (RU)", "Labor Productivity (LP)" and "Time to market (TM)".

Up to ISO 9000, performance measurement was mostly based on financial measures. Company frequently used the traditional measures for tracking the business performance like "Production cost (PC)", "Revenue (RE)" and "Profitability (PR)", "Market share (MS)" which almost reflect the short-term performance.

After ISO 9000 implementation, obtaining customer satisfaction became the goal of business, then, the measures relating customer perspectives are more frequently selected, such as "Solving customer complaint (SCC)" and "Customer satisfaction (CS)". Quality is also became essential issue of business. The companies now started to focus on customer satisfaction by providing better product quality. They're some new measure like "On-time delivery (OTD)", "Product innovation (PI)" became the popular indexes of business.

Table 8: Changing in Performance Measurement Structure

Index of performance measure	Aggregate				"Extent to TQM group"				"No extent to TQM group"			
	Before ISO 9000		After ISO 90000		Before ISO 9000		After ISO 90000		Before ISO 9000		After ISO 90000	
	$\overline{X}$	s	$\overline{X}$	s	$\overline{X}$	s	$\overline{X}$	s	$\overline{X}$	s	$\overline{X}$	s
Customer perspective												
Market share (MS)***	4.27	0.44	4.18	0.39	4.28	0.45	4.18	0.38	4.26	0.44	4.20	0.41
Solving customer complaint (SC)*	2.47	0.50	4.06	0.65	2.47	0.50	4.06	0.64	2.49	0.51	4.06	0.68
Company image (CI)*	2.51	0.50	2.7	0.90	2.52	0.50	2.64	0.97	2.49	0.51	2.68	0.69
Customer satisfaction (CS)*	3.04	0.69	3.94	0.65	3.06	0.68	3.94	0.64	3.0	0.73	3.94	0.68
Advertising effectiveness (AE)*	2.27	0.84	4.05	0.69	2.27	0.86	4.02	0.69	2.29	0.83	4.11	0.72
Financial perspective												
Production cost (PC)***	4.73	0.44	4.82	0.39	4.72	0.45	4.82	0.38	4.74	0.44	4.80	0.41
Inventory turnover (IT)*	4.7	0.46	4.82	0.39	4.68	0.47	4.82	0.38	4.74	0.44	4.80	0.41
*Revenue (RE)**	*4.98*	*0.13*	*4.98*	*0.13*	*5.0*	*0*	*5.0*	*0*	*4.94*	*0.24*	*4.94*	*0.24*
*Profitability (PR)**	*4.98*	*0.13*	*4.99*	*0.09*	*5.0*	*0*	*5.0*	*0*	*4.94*	*0.24*	*4.97*	*0.17*
Return of investment (ROI)*	2.53	0.5	3.58	0.49	2.53	0.5	3.59	0.49	2.51	0.51	3.54	0.51
Cash –flow (CF)*	1.78	0.41	2.16	0.73	1.8	0.4	2.09	0.73	1.74	0.44	2.34	0.73
*Economic value Added (VA)**	*2.22*	*0.83*	*2.37*	*0.93*	*2.19*	*0.83*	*2.28*	*0.92*	*2.29*	*0.83*	*2.60*	*0.91*
Productivity (PY)**	1.73	0.44	1.91	0.68	1.72	0.45	1.86	0.66	1.74	0.44	2.06	0.73
Internal business perspective												
Incoming part quality (IQ)*	4.47	0.50	4.73	0.54	4.47	0.50	4.82	0.38	4.49	0.51	4.49	0.78
In process quality (PQ)**	4.26	0.44	4.59	0.49	4.26	0.44	4.61	0.49	4.26	0.44	4.54	0.51
Final product quality (FQ)*	4.98	0.13	4.93	0.34	5.0	0	5.0	0	4.94	0.24	4.74	0.61
After sale service (AS)*	3.73	0.84	4.82	0.38	3.71	0.85	4.82	0.38	3.37	0.84	4.83	0.38
Product reliability (RY)*	4.51	0.50	4.76	0.43	4.52	0.50	4.77	0.43	4.49	0.51	4.74	0.44
Product lead time (PLT)*	3.51	0.50	4.42	0.49	3.52	0.50	4.41	0.49	3.49	0.51	4.46	0.51
*Product cycle time (CT)**	*2.53*	*0.50*	*2.58*	*0.49*	*2.53*	*0.50*	*2.59*	*0.49*	*2.51*	*0.51*	*2.54*	*0.51*
On-time delivery (OTD)*	3.78	0.83	4.54	0.50	3.81	0.83	4.53	0.50	3.71	0.83	4.57	0.50
Product innovation (PI)*	3.51	0.50	4.36	0.48	2.52	0.50	4.36	0.48	3.49	0.51	4.37	0.49
*Resource utilization (RU)**	*1.78*	*0.83*	*1.92*	*0.89*	*1.79*	*0.83*	*1.93*	*0.90*	*1.77*	*0.84*	*1.89*	*0.90*
Volume flexibility (VF)***	2.00	0.72	2.21	0.73	1.99	0.73	2.23	0.74	2.03	0.71	2.14	0.73
Innovation and grow perspective												
Development of employee skill (DE)*	2.46	1.08	3.46	1.11	2.69	1.06	4.02	0.58	1.86	0.91	2.03	0.82
Employee involvement (EI)*	1.26	0.44	2.82	0.98	1.26	0.44	3.11	0.92	1.26	0.44	2.09	0.78
Knowledge sharing (KS)***	1.74	0.44	1.63	0.48	1.73	0.44	1.64	0.48	1.77	0.43	1.6	0.50
*Labor Productivity (LP)**	*3.53*	*0.50*	*3.46*	*0.63*	*3.53*	*0.50*	*3.59*	*0.49*	*3.51*	*0.51*	*3.11*	*0.80*
Technology ability (TA)*	2.97	0.71	3.11	0.77	2.98	0.73	3.23	0.74	2.94	0.68	2.8	0.80
New product introduction (NI)**	3.29	0.69	3.42	0.74	3.48	0.50	3.59	0.49	2.8	0.87	3.0	1.06

RD innovation (RD)*	2.85	1.01	3.29	0.70	2.87	1.03	3.41	0.49	2.8	0.99	2.97	1.01
*Time to market (TM)**	*3.03*	*0.69*	*2.94*	*0.65*	*3.07*	*0.68*	*2.94*	*0.64*	*2.94*	*0.73*	*2.94*	*0.68*

5 point scale: 1: "Not used at all", 5: "Most frequently used"

The performance measure with no significant change is presented in italic

[]*: p < 0.001,   []** : p < 0.01 ,   []** < 0.05

The data in Table 8 show that, after ISO 9000, the structure of performance measures became more complex with more focusing in customer aspects while maintains critical utilization of financial measures. Because ISO 9000 requires company to control operation and production process, companies selected some measures reflecting about the internal business processes with some measures such as "Product lead time (PLT)" and "On-time delivery (OTD)". In term of innovation and grow issues, before ISO 9000, companies randomly used measures innovation capability and human resource development. After ISO 9000 implementation, with requirement of ISO 9001 standard (ISO 9001:2000, Chapter 6 – Resource management) companies frequently used the measures about "Development of employee skill (DE) " and "Employee involvement (EI)". It is important to note that some important indexes concerning the flexibility like "Volume flexibility (VF)", "Resource utilization (RU)" measures are rarely used in the company. In dept analysis the change in structure of performance measurement after ISO 9000, the companies can be classified by their decision to extent to TQM. Data in Table 8 shows that the trend and structure of performance measurement is almost the same in both groups. ISO 9000 gave impacts in both groups and make they become more frequently measure customer aspect. We can realize that, the "Extension to TQM group" measures their workforce's capability, involvement and development more frequent. It means that, following TQM philosophy, companies created quality-minded in their employee by educating the awareness and developing the skills. This long-term approach requires companies to periodically evaluate the achievement of humane resource management.

The data in Table 8 also shows that the custom of using performance measure among the companies is similar. They are using almost the same set of measure over the time. There are some measures has been used almost the time, but some measures rarely used. There is the lack of utilization of measures relating productivity, innovation capability, and value added analysis. It seems that the selection of performance measure is mainly intended for monitoring performance and not firmly intended to improve performance.

8.   Findings and Discussion

ISO 9000 implementation is not only a certification gaining process but also really a continuous improvement process. The PDCA management cycle of ISO 9000 requires companies to set-up, maintain and improve the management activities leading to match customer requirements [9]. The result of this research show that with the implementation of ISO 9000, the quality management system is strengthened with more effectiveness in responsibility and authority, product standardization and process control. The research found out that almost factor of ISO 9000 requirement help companies in Vietnam to improve quality performance, especially the internal process quality.

Implementing ISO 9000 also helps companies to improve the management system. One of influence of ISO 9000 is the change of performance measurement process. With the implementation of ISO 9000 requirements, the utilization of performance measurement is becoming more supporting the management system. Because of ISO 9000 structure consist of requirements concerning with quality planning, setting up the measurable objectives in all levels of organization, concerning with measuring, auditing, analyzing the performance also with correction and prevention, then the use of performance measurement is becoming

changed to support operational activities, strategy deployment, benchmarking, human resource management activities.

Because of ISO 9000 implementation requires the company to establish the documented system including operational procedure and data recording, also the company follows the PDCA philosophy in management activities, then, performance measurement is carried out more formal, meaning that, it is more standardized, periodically carried out, frequently updated and feed back to the employee. The result of survey shows that among the ISO 9000 standard requirements, quality planning plays critical role in term of setting up and maintaining the management system. The implementing ISO 9000 is a catalyst for promoting TQM. The companies, which obtain the high conformance and quality performance, trend to extent their management system to TQM. ISO 9000 implementation gave the significant change in performance measure. After implementing ISO 9000, company is keeping the utilization of traditional performance measure with more quality and customer satisfaction oriented.

The structure of performance measure is also getting more balancing; shifting from unique utilization of the finance and customer measures to utilization of indexes regarding about internal processes, learning and innovation aspects. The extension to TQM is also give impact in changing utilization of performance measure. The companies started to use non-financial measure that reflecting humane aspects.

9.   Conclusion

Standardization of product and production is irreversible trend of global economy. Majority of developed and developing countries have adopted ISO 9000 as the national quality system standards. In addition, ISO 9000 could be a vehicle for implementing TQM [10].

Implementing ISO 9000 is a critical organizational change that requires a transformation in the organization's, processes, strategic priorities, and culture, among others. This study examines the result of ISO 9000 implementation and its impacts to quality performance and performance measurement system. This study can be very useful to organization, especially the manufacturers in developing country, which attempt to identify factor of management system in order to improve competitiveness. Based on this empirical study, managers can exploit ISO 9000 as framework for by using the finding relationships and interdependencies between factors to assess and improve the quality performance.

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Appendix

Survey in Quality Management and Performance Measurement in Manufacturing Companies

1 General Information

    a. Company Name
    b. Address
    c. Type of production
- Mechanical manufacturing (machinery, motorcycle, automobile)
- Electronic manufacturing (home appliance, IT, telecommunication devices)
- Chemical manufacturing (plastic, construction material, gas)
- Textile and Garment
- Food processing (livestock, seafood, liquor)

    d. Type of ownership
- State owned
- Private
- Join-venture
- Foreign investment

    e. Work force
- Under 100 employees
- Under 100 employees
- Between 500-1000 employees
- Above 1000 employees

2. Quality Management System Information

    a.   Date of ISO 9000 certification
    b.   Scope of ISO 9000 certification
    c.   Action after ISO 9000 certification
- Have post-ISO 9000 plan and already deployed activities towards TQM implementation (such as QCC, 5S…)
- Stay at ISO 9000 certification and have no plan for extension to TQM

3. Situation of Quality Management System and Quality Performance after ISO 9000 Implementation

3.1 Evaluating ISO 9000 Implementation

Please give self- evaluated status of ISO 9000 implementation based on results of certification audit, surveillance audits, and internal audits. Ranking in 5 point-scales from "Not complied with ISO 9001:2000 standard at all" (1) to "Fully complied with ISO 9001:2000 standard"(5)

ISO 9000 implementation	Status of implementation				
Management responsibility					
3.1 Quality planning	1	2	3	4	5
3.2 Function and responsibility	1	2	3	4	5
3.3 Management responsibility/ leadership	1	2	3	4	5
Resource management					
3.4 Education and training	1	2	3	4	5
3.5 Work environment, infrastructure and safety	1	2	3	4	5
Product Realization					
3.6 Customer information management	1	2	3	4	5
3.7 Design control	1	2	3	4	5
3.8 Product Standardization					
3.9 Supplier control	1	2	3	4	5
3.10 Process control	1	2	3	4	5
3.11 Storage and handling	1	2	3	4	5
Measuring, Analysis and Improvement					
3.12 Inspection and testing	1	2	3	4	5
3.13 Nonconformity control	1	2	3	4	5
3.14 Internal quality audit	1	2	3	4	5
3.15 Quality improvement	1	2	3	4	5

3.2 Evaluating Quality Performance after ISO 9000 Implementation

Please indicate how the implementation of ISO 9000 impacted the improvement to quality performance (based on the results of contract performance, production, quality statistic and internal audit).

The ranking in 5 point-scales from "Not improved at all" (1) to "Strongly improved" (5).

Quality Performance indexes	Current situation				
3.16 Incoming quality	1	2	3	4	5
3.17 In-process quality	1	2	3	4	5
3.18 Final product quality	1	2	3	4	5
3.19 In time delivery	1	2	3	4	5
3.20 Solving customer complaint	1	2	3	4	5

4. Change in Using of Performance Measurement after ISO 9000 Implementation

This part is referring to the objectives of performance measurement and process of carrying out performance measurement. Based on management information, please evaluate the change of utilization of performance measure after implementing ISO 9000 referring 5 followings possible impacts.

Ranking is in 5 point-scales from "Strongly disagreed" (1) to "Strongly agreed" (5)

Change in use of performance measurement after ISO 9000	Score				
1. Performance measurement is supporting the planning, controlling, and coordinating the operational activities (such as quality management, supply chain management, production management, inventory control…)	1	2	3	4	5
2. Performance measurement is delivered strategy, long term plan and it supports the strategic deployment and enhancing the competitiveness	1	2	3	4	5
3. Performance measurement is supporting the benchmarking process	1	2	3	4	5
4. Performance measurement is supporting the planning, controlling, coordinating of Human Resource Management	1	2	3	4	5
5. Performance measurement is more standardized, periodically carried out, frequently updated and feed back to the employee	1	2	3	4	5

5. Change in Use of Selecting Performance Measures after ISO 9000 Implementation

Please indicate the frequency of use of performance measures before and after ISO 9000 implementation. 1: "Not used at all", 3: "Sometimes used", 5: "Most frequently used".

Index of performance measure	Before ISO 9000					After ISO 9000				
Market share	1	2	3	4	5	1	2	3	4	5
Rate of solving customer complaint,	1	2	3	4	5	1	2	3	4	5
Company image,	1	2	3	4	5	1	2	3	4	5
Customer satisfaction	1	2	3	4	5	1	2	3	4	5
Advertising effectiveness	1	2	3	4	5	1	2	3	4	5
Production cost	1	2	3	4	5	1	2	3	4	5
Inventory turnover	1	2	3	4	5	1	2	3	4	5
Revenue	1	2	3	4	5	1	2	3	4	5
Profitability	1	2	3	4	5	1	2	3	4	5
Return of investment ROI	1	2	3	4	5	1	2	3	4	5
Cash –flow	1	2	3	4	5	1	2	3	4	5
Economic value Added EVA	1	2	3	4	5	1	2	3	4	5
Productivity	1	2	3	4	5	1	2	3	4	5
Incoming part quality	1	2	3	4	5	1	2	3	4	5
In process quality	1	2	3	4	5	1	2	3	4	5
Final product quality	1	2	3	4	5	1	2	3	4	5
Customer complaint	1	2	3	4	5	1	2	3	4	5
Product reliability	1	2	3	4	5	1	2	3	4	5
Product lead time	1	2	3	4	5	1	2	3	4	5
Product cycle time	1	2	3	4	5	1	2	3	4	5
On-time delivery	1	2	3	4	5	1	2	3	4	5
Product innovation	1	2	3	4	5	1	2	3	4	5
Resource utilization	1	2	3	4	5	1	2	3	4	5
Volume flexibility	1	2	3	4	5	1	2	3	4	5

Development of employee skill	1	2	3	4	5	1	2	3	4	5
Employee involvement	1	2	3	4	5	1	2	3	4	5
Knowledge sharing	1	2	3	4	5	1	2	3	4	5
Productivity	1	2	3	4	5	1	2	3	4	5
Technology ability	1	2	3	4	5	1	2	3	4	5
New product introduction	1	2	3	4	5	1	2	3	4	5
RD innovation	1	2	3	4	5	1	2	3	4	5
Time to market	1	2	3	4	5	1	2	3	4	5

SESSION 2
Social Issues

An Overview of the Living Arrangements of the Elderly Population in Vietnam during Economic Transformation

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Abstract

Many studies have suggested that, under the context of high economic growth and strong flows of laborers from rural to urban areas, living arrangements of elderly people, particularly elderly women, and family relations will be more vulnerable to a variety of social and economic risks. This paper, using the Vietnam (Household) Living Standard Surveys in 1992/93, 1997/98, 2002, and 2004, will examine the issue by decomposing the elderly population in Vietnam with regard to various aspects of aging. With an investigation of numerous variables such as education, household living arrangements, and housing conditions, it is found that family relations have generally been maintained in Vietnam, although social and economic contexts have changed rapidly since *Doi moi*. We find a relatively high proportion of elderly people living with their children, particularly married sons. In addition, the elderly are not simply dependents in the households; indeed, they are still contributing to the households in various ways. A detailed decomposition of data on the elderly people, however, shows that women have certain disadvantages in comparison with men due to lower education, higher levels of widowhood and living alone. There is also a big disparity gap between elderly people living in urban and rural areas, and between regions. Another striking finding is that during the past decade, poverty rates of the elderly people were actually lower than that of nonelderly people, and the highest poverty rates occurred with very young or very old people.

1. Introduction

The elderly populations in many countries are growing and will continue to grow in the coming years, both in absolute numbers and as a percentage of the population. According to the medium-variant population projections of the United Nations (2004), there are about 610 million people aged 60 and over (or 10% of the world population in 2000), and this number is expected to grow to around 1.9 billion people (or 22% of the world population) in 2050. These demographic trends have mostly resulted from decreasing fertility rates and increasing life expectancy. In addition to such demographic changes, some studies on the elderly population, such as Mason (1992) and Schwarz (2003), raised a concern that economic

transformation with urbanization and increasing migration might weaken the traditional family structure, which would leave more elderly people without the traditional support and care from their families.

Vietnam, as one of the fastest growing economies in the world, is indeed experiencing the changes just described. The medium-variant projections of the United Nations (2004) indicate that the elderly population in Vietnam will increase significantly from 7.5 percent of the total population in 2005 to about 26 percent in 2050. The demographic dependency ratio will be driven mostly by the elderly dependency ratio as the child population will increase at a slower pace. Of the current elderly population, a majority are living in rural and disadvantaged areas. Moreover, swift economic transformation since *Doi moi* has had significant impacts on all areas of society, especially with the changes of economic structure from agriculture-based to industrial production, and urbanization with strong flows of laborers from rural to urban areas. Though great successes, such as rapid poverty reduction and considerable improvement of living standards, have been widely acknowledged, many groups of people, including the elderly, are still living in poor and vulnerable conditions (Le Bach Duong et al., 2005). Given the low coverage of the social security systems in Vietnam, the situation may become worse if there is not an appropriate response from the government to these continuing changes. Therefore, studies of various social and economic aspects of the elderly population need to be carried out thoroughly so as to understand appropriate responses for the social welfare policies.

Guided by such research needs, this paper seeks to quantify the extent and the evolution of the elderly population in Vietnam by using the Vietnam (Household) Living Standards Surveys in 1992/93, 1997/98, 2002, and 2004. Specifically, the paper will answer such questions as how are the living arrangements of the elderly changing; are the elderly contributing to their households, and are there important differences between regions of the country, or between urban and rural residents?

To accomplish these goals, we firstly review the existing studies on the elderly population in Vietnam. Then, we present our data and methodology, as well as advantages and limitations of the data. This is followed by our analysis and implications for social welfare policies. The last section will present concluding remarks and directions for further studies.

In providing an overview of the Vietnamese elderly population during economic transformation, some key findings of this paper include:

- The elderly population has been growing during the past decade, as were the number of elderly living alone.

- We consider three types of elderly households, including those where an elderly person is the head of the household, where the elderly is dependent on others, and where the elderly are living alone. We find that the increase in the elderly living alone was offsetting households where the elderly were dependent on others.

- Women experience more disadvantages, such as widowhood and lack of education.

- Data on working status and housework show that the elderly people were still active contributors to the households in various ways.

- Poverty rates have been falling in each of the surveys, though the highest poverty rates remained among the extreme young and extreme old.

- Housing conditions for the elderly have significantly improved overtime.

- Generally, the elderly of Vietnam did not face a worse situation than younger people. Family bonds appeared to remain strong, and the elderly were taken care of.

- Defining elderly at age 60 is too young. The hardships of old-age do not come until later ages.

2. Studies on the Elderly Population in Vietnam: A Review

Research on the elderly population in Vietnam has grown rapidly in the past decade, and different survey data were used to analyze the elderly people and their households. For example, Hirschman and Vu (1996) used the 1991 Vietnam Life History Survey, which was a survey of 403 households during January-March 1991 in four areas, i.e. a rural village and an urban area in northern Vietnam (in Red River Delta), and a rural village and an urban area in southern Vietnam (in Mekong River Delta). The purpose of their study was to analyze the impacts of Confucian thought on contemporary family and household structure, and how these impacts varied between the two regions.

Another set of two regional surveys on Vietnamese persons aged 60 and over has been used extensively by many studies, such as Truong Si Anh et al. (1997) and Knodel et al. (2000). These surveys, which were conducted in the Red River Delta (including Hanoi) in 1996, and in Ho Chi Minh City (HCMC) and its six adjacent provinces in 1997, could provide various information about rural and urban diversity, household composition, and household relations in terms of support and care.

In addition to the above microdata surveys, a variety of studies also used larger survey samples to accomplish their research goals. Bui The Cuong et al. (1999) used the 1994 Vietnam Inter-censal Demographic Survey in combination with those regional surveys to explore living arrangements of the elderly in two regions. To compare living arrangements of the elderly and their households overtime, Knodel and Truong (2000) used the 5 percent public use sample of the 1989 Census and the 3 percent public use sample of the 1999 Census. More recently, Barbieri (2006) used the 3 percent public use sample of the 1999 Census and the Vietnam Living Standard Survey (VLSS) 1997/98 to analyze rates of coresidence and flows of remittances between the elderly and their children.

Even though these studies drew on numerous surveys with different sizes and characteristics, some common trends emerged. First, the population showed a clear aging process that was faster than official population projections by the United Nations (Knodel and Truong, 2000). By marital status, all of the existing studies showed that majority of the elderly people (over 95 percent) were married or widowed, and widowhood was more common among rural residents and women (Truong Si Anh et al., 1997). In terms of education, which was measured by schooling and literacy, the studies also indicated that the female elderly were much more disadvantaged than their male peers, and urban residents had higher educational levels than their rural counterparts (Knodel and Truong, 1997; Friedman et al., 2002).

Second, living arrangements of the elderly and their households indicated that family relations remained strong in Vietnam despite substantial changes in social and economic conditions. The studies all indicated that only a small share of the elderly were living alone, and most were living with or nearby their children. Also, coresidence rates did vary between

regions and areas (Hirschman and Vu, 1996; Bui The Cuong et al., 1999; Friedman et al., 2002). Among those who were living with adult children, a majority preferred to live with married sons, particularly in the Red River Delta (Knodel et al., 2000). In addition, coresidence depended on marital status of the elderly, e.g. both non-married men and women were considerably more likely to live with a married child than were their currently married counterparts (Friedman et al., 2002: 5). Among those who were not living with children, men were more likely to live with a spouse, and women were more likely to live alone (Babieri, 2006). Similarly, Knodel et al. (2000) showed that more than half of non-coresident elderly in the north and over two-thirds in the south either lived adjacent to or very near to a child. The situation for the childless elderly was not worse as they lived with an adult relative or spouse, and only 12 percent of them in the north and a third of them in the south lived alone.

Also relevant to family relations is the support and care between the elderly and their children. Hirschman and Vu (1996) found a relative high frequency of visiting or making contacts between adult children and their parents. About 60 percent of adult children who lived nearby their parents, saw them daily, and most of the rest saw them at least once a week. Truong Si Anh et al. (1997) found that exchanges of food, clothes, and other goods were fairly common between elderly parents and their child(ren) in all regions, and economic support from within the family was more important than non-family support. Similar findings were also indicated in Bui The Cuong et al. (1999) that family support from both coresident and non-coresident children were the main sources of support and care for the elderly (42 percent and 66 percent in the north and the south, respectively), and the type of support showed regional difference, as foodstuff was popular in the north, while cash was substantial in the south. Furthermore, Knodel et al. (2000) showed that children frequently provided material support to their parents, and there was regional difference in support type and child proximity to parents. A U-shaped relationship was observed for such provision and child proximity to parents, and it was even more pronounced for regular provision of money and expensive goods (2000: 93). Evaluating family support with such questions as whether a child is an important source of the elderly's income, and material transfers (food or money) from child(ren) to parents, Friedman et al. (2002) showed that southern elderly were more likely to report that children were main contributors to household income than were northern elderly, and nonmarried elderly were more likely to claim a child as a main contributor than were married elderly (2002: 8). Moreover, the study indicated that in general that there was no clear gender pattern in the receipt of intergenerational support by the Vietnamese elderly. By exploring gender and coresidence factors, Barbieri (2006) implied that remittance was a major alternative form of support from child(ren) to their parents, in which about 20 percent of the elderly received remittance from a non-coresident child in the previous 12 months, 16 percent from a son, and 12 percent from a daughter (2006: 23). Sons tended to send support more often than daughters (25 percent vs. less than 20 percent of all elderly households), and older elderly received more often than younger elderly. Further, with multivariate analysis, the study confirmed that women were more likely to receive from both sons and daughters than men (in contrast to the findings of Friedman et al., 2002), and the non-coresident elderly were more likely to receive than the ones coresiding with children. Urban and wealthier elderly were more likely to receive support from their children than rural and poor peers. The study then suggested that intensification of migration did not jeopardize intergenerational solidarities and children continued to support their elderly parents, particularly in vulnerable cases.

One common and critical finding from these studies was that only a modest percentage of elderly people received pensions or welfare payments, and such payments were rarely a main source of income (Bui The Cuong et al. 1999; Knodel and Truong, 2000). Particularly, the relative dependence of non-married elderly women on non-pension state payments, which

were small and less frequently paid, indicated their relative vulnerability to social and economic risks. If family support gradually erodes, maintaining the livelihood of such people could become a greater public policy need.

Third, many elderly people remained active, either working for various types of enterprises or doing housework. Bui The Cuong et al. (1999) pointed out that the working rate of the elderly was respectively 41 percent and 35 percent for the north and the south. By gender, Friedman et al. (2002) showed that there was almost no gender difference in the north (42 percent for men vs. 41 percent for women), but a significant difference in the south (46 percent for men vs. 28 percent for women). Both economic structure and culture could help explain these regional differences. In addition, Knodel and Truong (2002) found that women were less economically active for all older age groups, but active for housework. Also, economic activity rates among older people in urban areas were considerably lower than that of their rural peers.

Fourth, living conditions for the elderly have clearly been improving over time. The results from Knodel and Truong (2002) showed that housing conditions significantly improved. More elderly people, particularly in rural areas, were likely to access mass media such as TV and radio, use better toilets, and have electricity as the main source of lighting.

Although these existing studies could provide informative and thorough measures on living arrangements of the Vietnamese elderly, they did not make a distinction between the elderly who were household heads, and the elderly who were dependents in the household, except the study by Hirschman and Vu (1996). These differences are potentially quite important. As indicated in many studies on the family relations in the elderly households, such as Schwarz (2003) and HAI (2004), the elderly would feel confident if they could control some resources, and family members would not consider them as a burden. Distinguishing the role of elderly people in their households will help to show how they are treated when their economic and social status changes.

Moreover, the reviewed studies also did not provide any information about the poverty status of the Vietnamese elderly over time. Analysis of the elderly's poverty incidence will provide useful information about their relative vulnerability with the rest of the population, so as to indicate appropriate social welfare policies for the government. One of the reasons for such missing analysis in the existing studies might be due to data limitations.

3. Data and Methodology

In this paper, we use the Vietnam (Household) Living Standard Surveys for the years 1992/93, 1997/98, 2002, and 2004. These surveys were conducted by the General Statistics Office of Vietnam (GSO), along with other international agencies as a part of the World Bank's Living Standard Measurement Surveys. Detailed descriptions of these surveys can be found in numerous research reports, such as Grosh and Glewwe (1998), GSO (2004 a, b), and World Bank (2000, 2001, and 2005).

The surveys are organized by household, but they also include some characteristics for individuals in the household, such as age, gender, relationship to household head, marriage status, working status, salary, health, and education. This structure lets us identify the elderly people, as well as the households that include elderly people. In this paper, we consider the elderly as people who are at least 60 years old, and the elderly households are those with at least one elderly person. Table 1 provides information on the sample sizes for the four surveys.

Table 1. Number of Households and Individuals in the V(H)LSS

Year	Number of Households	Number of Individuals
1992/93	4,800 (1,514)	24,068 (2,047)
1997/98	6,002 (2,121)	28,633 (2,860)
2002	29,530 (8,759)	132,384 (11,940)
2004	9,189 (2,784)	39,696 (3,806)

Note: The number of elderly households and the number of elderly people are in parentheses.

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

At the household level, the surveys provide extensive data on sources of income, business and agricultural enterprises, detailed household expenditures, ownership of consumer durables, poverty incidence, poverty alleviation programs, wealth, and housing conditions. The households are representative of the entire Vietnamese population, both urban and rural, and across the regions, so that we can provide an overview of the elderly population for Vietnam as a whole.

There are some limitations with the data. Firstly, we generally only have information about relatives who live in the same household (particularly in the later surveys), and therefore it is difficult to identify other relatives who may be living nearby or migrating to other areas. These relatives are extremely important when we consider their support from/to the elderly people. Thus, for instance, while we know about receipt of remittances, we cannot say what percentage of non-coresident children provide them. Secondly, besides wages, most income sources are only identified at the household level, so it is not clear which member is the source of the income. Wealth data is also only available at the household level. This limits the analysis of intra-household sharing. Thirdly, some survey questions change over time. This includes questions in which the answer categories change. Also, some interesting questions only appear in the earlier surveys (e.g. a list of children living outside the household, a detailed list of remittances sent and received by the household, and individualized information about health status), while other interesting questions are not added until the later surveys (mainly, detailed information about a variety of income sources for the household). This inconsistent structure again limits our comparative study between years.

In this paper, we will analyze our research objectives by using simple tabulations of data for each survey to observe trends over time. Since data are representative for the entire Vietnamese population, we can observe changes in living arrangements and other characteristics of the Vietnamese elderly during the past decade as they experienced profound social and economic changes.

4. Results and Analysis

The elderly population will be analyzed along different aspects, such as gender, age, areas, and regions. We consider general characteristics of the population, living arrangements, working status, housing conditions, and poverty situation.

4.1. General Characteristics of the Population

Table A-1 provides general information about the Vietnamese population with regard to the elderly and nonelderly. First, we can observe aging in Vietnam, as the percent of the population in older age brackets grew over time. For instance, the percentage of the population aged 80 and older grew from 0.73 percent in 1992/93 to 1.5 percent in 2004.

// Table A-1 is about here //

We also find that aging process in Vietnam was slightly faster than the projections of the United Nations (2004) as 9.9 percent of the population was elderly in 2004. Along with the aging process, we also could see an increasing percentage of females and of widows in the elderly population (from 56.81 percent in 1992/93 to 58.42 percent in 2004 for the former, and from 33.9 percent in 1992/93 to 36.99 percent in 2004 for the latter).

Figure 1. Marital Status of the Elderly in Vietnam, 1992/93 & 2004
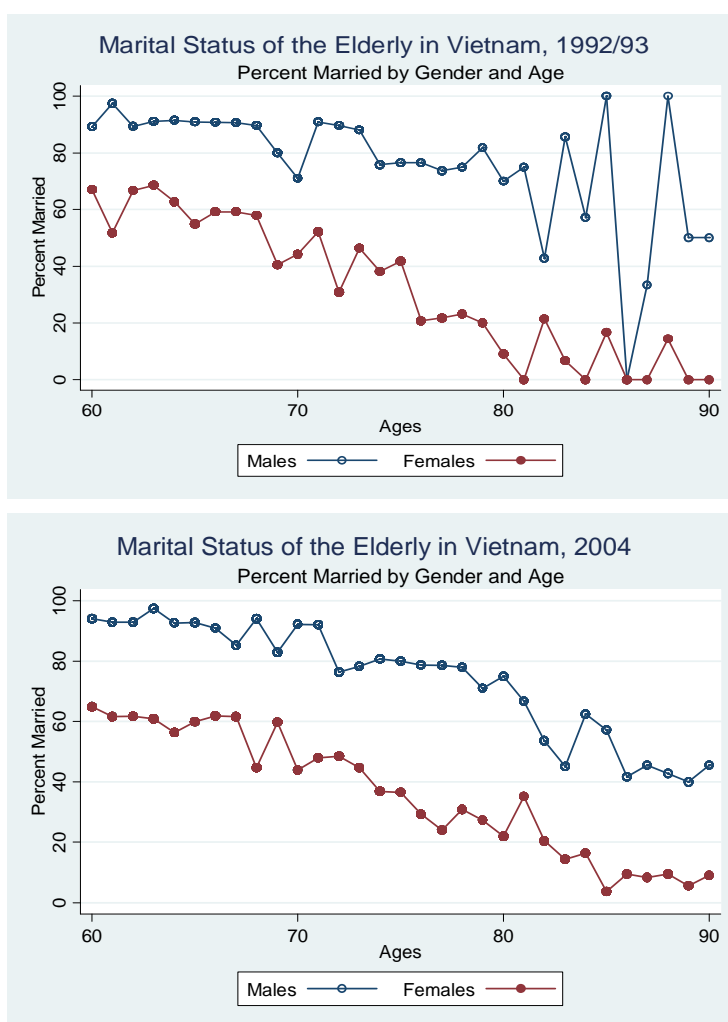
Source: Authors' calculation from VLSS 1992/93 and VHLSS 2004

The data also show that the majority of the elderly lived in rural areas (over 70 percent), but this percentage decreased over time on account of increasing urbanization. In addition, the data show that almost half of the elderly population was living in the Red River Delta and the

Mekong River Delta, where agriculture-based activities are still popular. By marital status, most of the elderly people were married or widowed (over 97 percent). Figure 1 shows that the elderly women were less likely to be married than elderly men. As explained in Knodel and Truong (1997: 2), the situation could be attributable to several factors, including differences in life expectancy between males and females. Indeed, widowhood is common among rural residents and women.

As indicated in Table A-2, educational background of the elderly people, which is measured by reading and writing ability, varied with gender, marital status, area, and region.

// Table A-2 is about here //

By gender, the estimated results show that the elderly women had a clear disadvantage in comparison with their male peers, although the gap between males and females was getting smaller. Moreover, urban residents and younger elderly had stronger educational backgrounds than their rural and older counterparts. By marital status, the data indicate that the widowed elderly tended to have lower educational backgrounds than the married and nonmarried elderly, and the married elderly had the highest rate of reading and writing ability. One critical detail can be seen if we look at educational gap between regions. The elderly in poor regions, such as the North West and the Central Highlands which are isolated and remote areas, had the lowest rates of reading and writing ability, and this situation might in turn prevent them from accessing social services.

4.2. Family Structure of the Elderly Households

Table A-3 provides information about household living arrangements in the surveys. About 70 percent of the population lived in nonelderly households, and the remaining 30 percent lived in elderly households. The majority of elderly lived in households where an elderly person was the household head (over 60 percent). In those households, it would be more reasonable to think of children as more dependent on their elderly parents, than vice versa. The fact that many households with an elderly head still had multiple children living at home supports this argument.

// Table A-3 is about here //

A potentially worriedsome trend, meanwhile, is what appears to be a shift over time from households with dependent elderly to only elderly households. The percentage of the elderly living as dependents declined from 27.21 percent in 1992/93 to 17.72 percent in 2004, while the corresponding elderly living in only elderly households increased from 13.43 percent to 20.67 percent in the same period. Figure 2 shows this situation in graphical terms, as the percentage of dependent elderly was squeezed at all ages.

Meanwhile, the percentage of elderly in the one-person elderly households grew from 3.47 percent in 1992/93 to 5.62 percent in 2004. The situation was prevalent among female and rural residents. For instance, about 80 percent of the elderly who lived alone were female, and also 80 percent of them lived in rural areas. Given various social and economic disadvantages of the female elderly in comparison with their male counterparts, the situation calls for social policy makers to give more attention to effective social welfare policies for the elderly females, such as education and income generation (UNDP, 2002).

Figure 2. Household Living Arrangements of the Elderly, 1992/93 & 2004

Household Living Arrangements of the Elderly, 1992/93
Percentage Breakdown

Legend: Only Elderly, Dependent Elderly, Elderly Head

Household Living Arrangements of the Elderly, 2004
Percentage Breakdown

Legend: Only Elderly, Dependent Elderly, Elderly Head
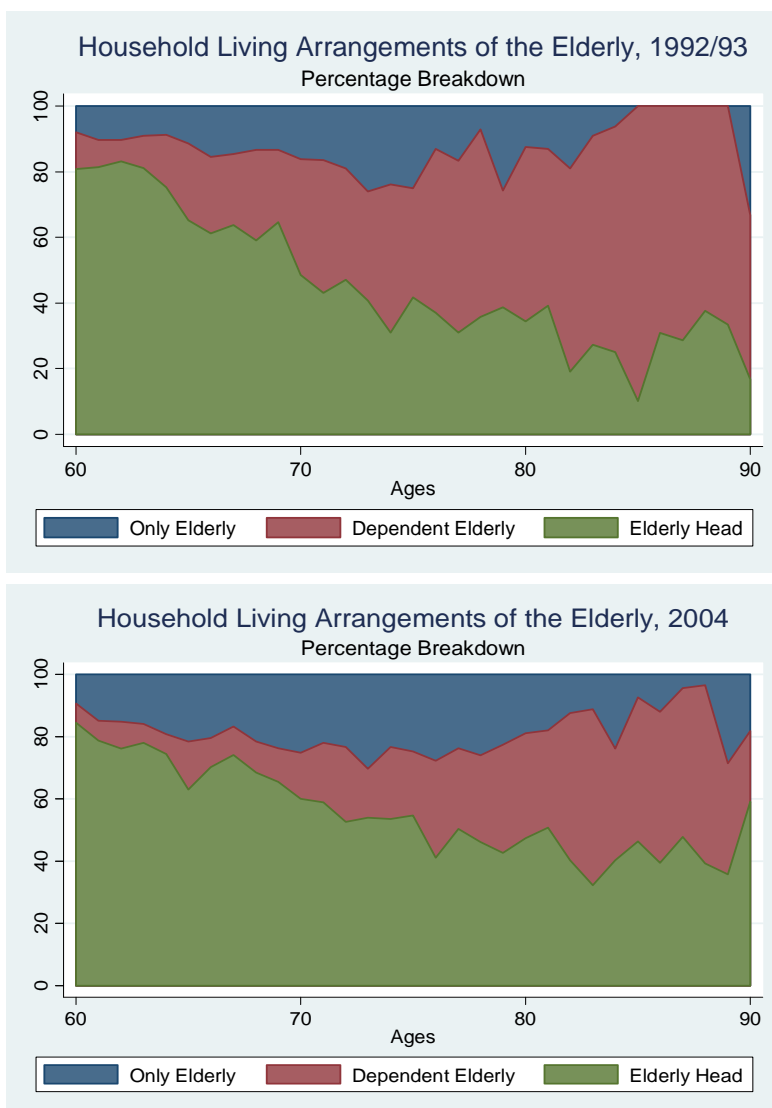
Source: Authors' calculation from VLSS 1992/93 and VHLSS 2004

Among the dependent elderly, over time the vast majority were found living with their married sons. There were significant differences between rural and urban areas regarding this situation, in which the percentage of dependent elderly living with married son in rural areas remained the same, while it decreased over time in urban areas. This difference could be explained by various reasons, including different characteristics of working and living styles between areas, and also the influence of Confucian thought in family relations. This finding is also the same as that of previous studies on Vietnam, and that of Chen (1998) for Taiwan, and Lin (2001) for China. However, though it is rural phenomenon, this result is different from that of Knodel and Napaporn (1997), which indicated that Thai elderly people had preference to live with a married daughter.

Table A-3 also shows that this trend also held, but to a much lesser extent, in the households where an elderly person was the household head.

4.3. Working Status and Housework of the Elderly People

Table A-4 shows the information about working status of the elderly. We can see that many elderly remained active, and they were working either for salary, or for the household's agricultural and/or other enterprises. The average working rate was about 45 percent.

// Table A-4 is about here //

By area, rural dwellers had significantly higher working rates than their urban counterparts, and this situation could be explained by the fact that many rural elderly people were engaged in agriculture-based activities. By gender, the elderly female were less economically active than their male peers. In addition, married and non-married people were more substantially active than widows. Higher employment rates were also found among the elderly in households with an elderly head or with only elderly members. In dependent elderly households, less than 20 percent of the elderly worked. This evidence might imply that elderly who faced the most trouble working (either health problems or disability) were able to rely on their children for help. By age, the elderly aged from 60 to 64 maintained over 60 percent employment rates, and this percentage gradually decreased with increasing age. In summary, lower employment rates could be found among urban dwellers, widows, women, those over age 70, and those elderly who lived as dependents in households.

// Table A-5 is about here //

Table A-5 shows the data on housework among the Vietnamese elderly. Generally, the same trends found for working status also apply to housework, but the extent of the differences tends to be smaller. The exception is that women did much more housework than men.

4.4. Housing Conditions of the Elderly Households

In the surveys, there are many indicators that can be used to evaluate the housing conditions of the elderly households. In this paper, we use the following indicators: (1) housing structures, (2) sources of drinking and cooking water, (3) toilet usage, and (4) sources of lighting. Table A-6 presents data on the housing conditions of the elderly households through four surveys. We can observe that there were improvements in all areas, most notably in the widespread adoption of electric lighting for homes.

// Table A-6 is about here //

First, housing structures have improved over time. The percentage of temporary houses decreased from 29.25 percent in 1992/93 to 18.83 percent in 2004, while the percentage of houses with bathroom, kitchen, and toilet (BKT) increased in the same period, particularly for the houses with shared bathroom, kitchen, and toilet (from 1.91 percent to 10.51 percent).

Over the decade, the elderly households had more chances to access better water sources for drinking and cooking, which in turn might be good for their health. Percentage of the elderly households using individual tap increased (from 10 percent in 1992/93 to 14 percent in 2004). There were, however, still many elderly households relying on natural water sources such as spring water, rain water, and water from rivers, lakes and ponds.

Hygiene conditions in term of toilets were also significantly improved over the past decade. As can be seen in Table A-6, more modern toilet types were used in the elderly households, e.g. the percentage using flush toilets with septic tanks increased from 12.88

percent in 1992/93 to 25.44 percent in 2004, while the percentage using simple toilets decreased substantially from 55.78 percent to 24.13 percent in the same period. Nevertheless, about 15 percent of elderly households did not have any toilet, which might harm their health through bad hygiene conditions.

One of the most substantial improvements during the period was the increased percentage of elderly households using electricity as a main source of lighting. It increased from 52.13 percent in 1992/93 to almost 94 percent in 2004. The improvement resulted from the rural electrification program promoted by the government since late 1990s. At the same time, the percentage of the elderly households using gas, oil, and kerosene lamps decreased significantly from 46.49 percent in 1993 to only 4.23 percent in 2004.

4.5. Poverty Status of the Elderly and Their Households

In this paper, we follow the Vietnam's General Statistics Office (GSO) to calculate per capita expenditures-based poverty rates. The GSO method is to calculate the minimum expenditures needed to satisfy basic nutritional and living needs. Moreover, this method provides an absolute poverty line that stays constant in real terms over time. Table 2 shows the GSO poverty lines over time.

Table 2. GSO Poverty Lines

Year	Poverty Lines by Per Capita Real Expenditures
1992/93	1,160 thousand Dong/year
1997/98	1,790 thousand Dong/year
2002	1,917 thousand Dong/year
2004	2,077 thousand Dong/year

Table A-7 provides our estimates of poverty rates in Vietnam for different categories. As can be seen, poverty rates decreased dramatically across Vietnam since the first survey (57.6 percent overall in 1992/93 to 19.3 percent overall in 2004).

// Table A-7 is about here //

Although poverty rates reduced impressively in all regions, they remained high in the North West and the Central Highlands. The situation indicates that the government should promote poverty reduction programs more effectively in these regions. In addition, it is also clear that regional disparities remained over time.

By area, we see than poverty rates reduced substantially in both urban and rural areas. For instance, elderly poverty rates decreased from 58.1 percent to 22.8 percent in rural areas, and from 19.6 percent to 4.3 percent in urban areas between 1992/93 and 2004. Despite dramatic improvements, poverty consistently remained higher in rural areas.

Figure 3. Poverty Status of the Elderly Households by Living Types, 1992/93 & 2004

Comparable Per Capita Expenditure in 1992/93 by Household Type
Line Denotes Poverty Threshold

Comparable Per Capita Expenditure in 2004 by Household Type
Line Denotes Poverty Threshold
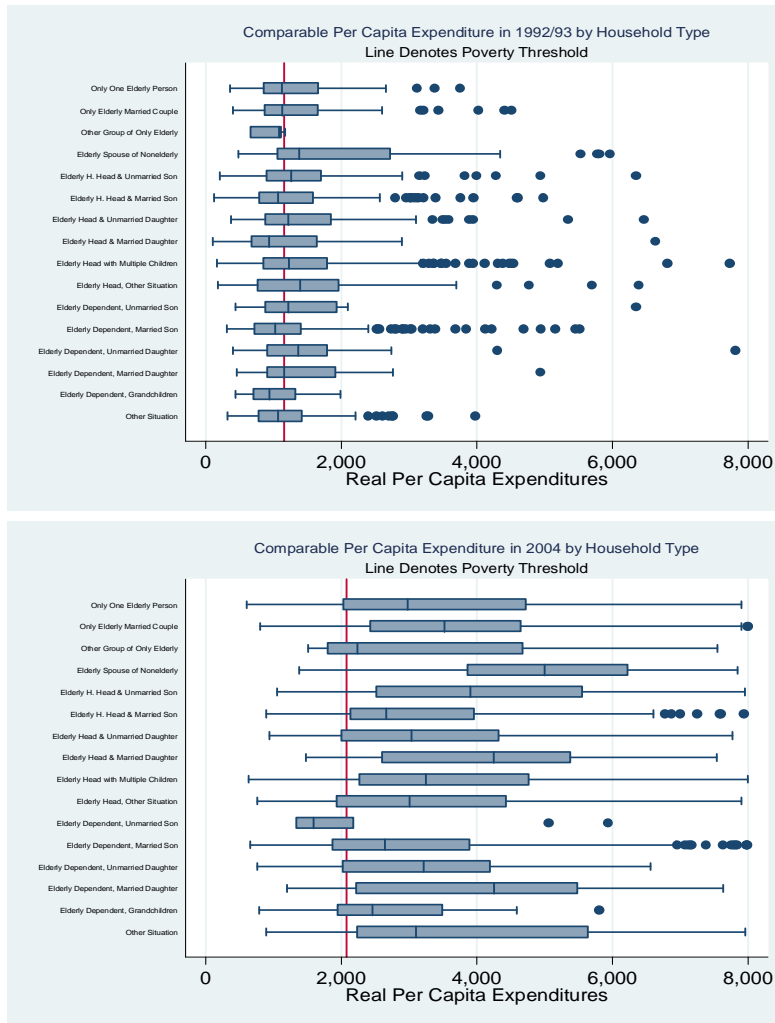
Source: Authors' calculation from VLSS 1992/93 and VHLSS 2004

By marital status and gender, the differences among the groups were small, but married people and males tended to have slightly lower poverty rates than their counterparts.

With regard to living arrangements, Figure 3 shows the distribution of per capita expenditures in comparison to the poverty thresholds. The figure illustrates the impressive gains in poverty reduction, though no particular pattern for poverty rates among various living arrangements emerged.

One of the most important matters for social welfare is to address the relative poverty and vulnerability of various groups in Vietnam. By looking at the poverty rates for different age groups, we found one of the striking results was that poverty rates of the elderly were actually lower than that of the nonelderly. Figure 4 provides further evidence of this trend.

Figure 4. Poverty Rates by Gender and Age in Vietnam, 1992/93 & 2004

Poverty Rates by Gender and Age in Vietnam, 1992/93

Poverty Rates by Gender and Age in Vietnam, 2004
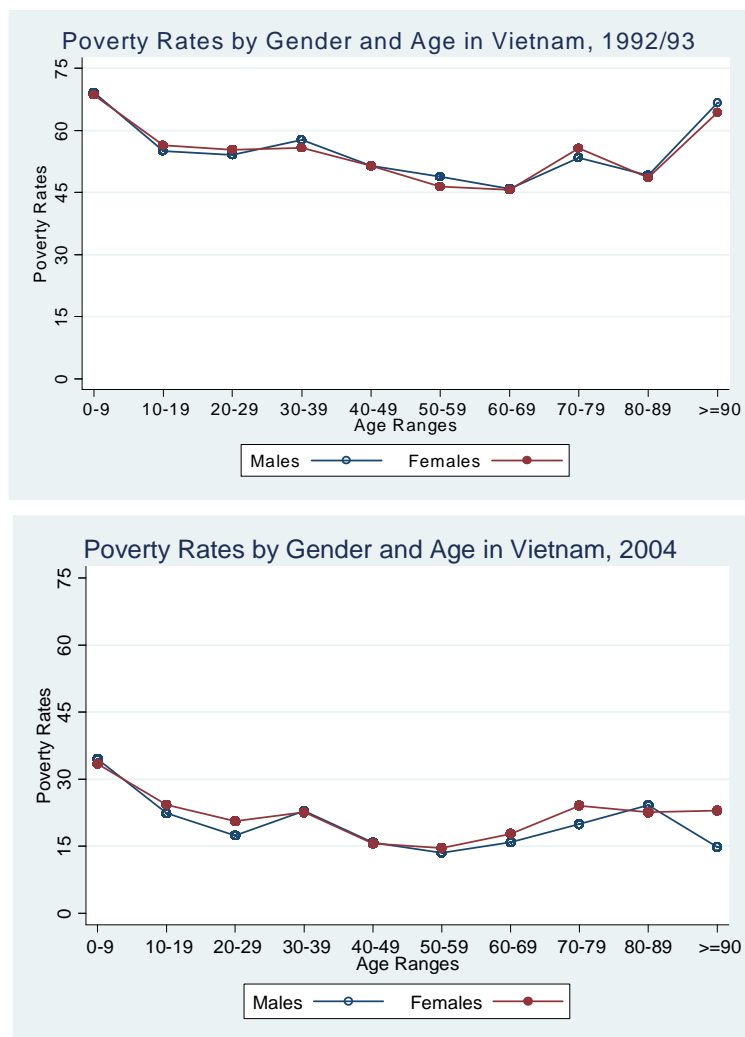
Source: Authors' calculation from VLSS 1992/93 and VHLSS 2004

In Figure 4, poverty rates present a U-shaped pattern across the age distribution with the highest rates occurring at the youngest and oldest ages, and the lowest poverty rates occurring in the 50s and 60s. This means that, for the current elderly population in Vietnam, defining elderly at the age of 60 might be too young, as hardship tends to occur mostly at later ages.

Although the above information illustrates in detail the official poverty incidence of the elderly population in Vietnam, there are potential biases with the official measure. As indicated in a variety of studies on measurements of elderly poverty, such as Schwarz (2003) and Barrientos (2006), such poverty measures are only established for the household as a whole rather than for particular individuals. Therefore, it is quite difficult to analyze the elderly's relative poverty and vulnerability in comparison with the rest of the population. In order to get more detailed information about poverty of the elderly people, a number of indicators, such as family composition and control of family resources, need to be taken into account. Also, large households may be have less burdened than the official measures suggest because of economies of scale in their expenditures for housing and other goods, and when this is accounted for along with the fact that elderly households are generally smaller, we may see a rise in elderly poverty relative to the rest of the population. We will further explore these issues in subsequent research.

5. Concluding Remarks

Like many countries in the world, the aging process in Vietnam is taking place more rapidly than official population projections, such as United Nations (2004). An aging society that is also undergoing rapid social and economic changes produces a potential concern for public policy. This paper, using the Vietnam (Household) Living Standard Surveys from 1992/93 to 2004, aims to examine the elderly population of Vietnam with various aspects of aging to identify the potential stresses.

By investigating such indicators of the elderly as education, household living arrangements, and housing conditions, the paper found that family relations remained strong in Vietnam despite profound social and economic changes. We found a relatively high proportion of elderly people living with their children. In addition, the elderly were not simply dependents in the households; indeed, they still contributed significantly to the households in various ways. Their housing conditions and standard of living have also improved over time.

Despite the general improvements, however, the detailed decomposition of data shows that many disparities remained among the elderly population. Disadvantages remained for women, for those in rural areas, and especially in particular regions of the country. Given the current social security system with low coverage of the population, the elderly people might face a variety of social and economic risks as well as societal circumstances continue to change.

In the next step of research on the elderly population in Vietnam, we will explore in more detail income and poverty issues, in order to pursue our keen interest in Vietnamese pension reform issues. We will consider how a non-contributory pension (NCP) scheme might operate and benefit the Vietnamese elderly.

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TABLE A-1
Demographic Characteristics of the Vietnamese Population
Percentages Across Demographic Categories

	1992/93 VLSS		1997/98 VLSS		2002 VLSS		2004 VLSS	
	Nonelderly	Elderly	Nonelderly	Elderly	Nonelderly	Elderly	Nonelderly	Elderly
Population								
Number (people)			68,147,981	7,658,661	69,521,434	7,081,223	71,665,846	7,875,604
Percent	91.49	8.51	89.9	10.1	90.76	9.24	90.1	9.9
Region								
Red River Delta	19.89%	23.95%	19.15%	23.78%	21.56%	25.35%	21.67%	25.78%
North East	14.42%	13.11%	15.19%	13.73%	11.96%	10.89%	11.69%	10.46%
North West	2.72%	1.83%	2.97%	1.73%	2.76%	2.13%	3.12%	1.93%
North Central Coast	12.74%	13%	13.76%	14.48%	13.35%	13.87%	13.17%	12.59%
South Central Coast	9.3%	10.89%	8.46%	8.68%	8.35%	9.79%	8.56%	9.93%
Central Highlands	2.34%	2.03%	2.89%	1.85%	6%	4.01%	5.18%	3.4%
South East	16.13%	13.61%	15.92%	15.56%	14.64%	14.03%	16.26%	15.37%
Mekong River Delta	22.45%	21.52%	21.64%	20.2%	21.38%	19.94%	20.35%	20.55%
Urban / Rural Status								
Rural	80.31%	77.73%	77.96%	74.06%	76.76%	76.83%	74.23%	73.33%
Urban	19.69%	22.27%	22.04%	25.94%	23.24%	23.17%	25.77%	26.67%
Marital Status								
Married	54.37%	64.04%	52.09%	61.63%	41.73%	61.69%	56.12%	60.51%
Widowed	2.35%	33.9%	2.17%	35.81%	1.52%	36.44%	2.08%	36.99%
Otherwise Not Married	43.29%	2.05%	45.74%	2.56%	56.75%	1.87%	41.8%	2.5%
Gender								
Male	48.71%	43.19%	49.16%	41.93%	50.23%	42.79%	50.3%	41.58%
Female	51.29%	56.81%	50.84%	58.07%	49.77%	57.21%	49.7%	58.42%
Age Range								
Less than 60	91.49%		89.9%		90.76%		90.1%	
60 - 64	3.07%		2.97%		2.46%		2.65%	
65 - 69	2.07%		2.79%		2.29%		2.27%	
70 - 74	1.72%		2.02%		1.97%		2.07%	
75 - 79	0.92%		1.3%		1.26%		1.41%	
80 - 89	0.66%		0.9%		1.08%		1.27%	
90 and Older	0.07%		0.11%		0.18%		0.23%	

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

TABLE A-2
Educational Background of the Elderly Population
Question: Can person read and write? (Percent of who answer "Yes")

Regions	VLSS 1992/3	VLSS 1997/8	VHLSS 2002	VHLSS 2004
Red River Delta	55.39%	64.08%	62.38%	61.25%
North East	52.83%	54.66%	55.29%	56.58%
North West	25.24%	29.07%	32.25%	36.75%
North Central Coast	61.74%	58.87%	56.98%	57.48%
South Central Coast	53.64%	58.04%	63.05%	61.73%
Central Highlands	29.27%	37.08%	42.65%	46.91%
South East	60%	57.81%	61.66%	64.26%
Mekong River Delta	51.04%	56.41%	57.02%	59.61%
Rural/Urban				
Rural	50.16%	55.47%	56.89%	57.18%
Urban	70.31%	66.48%	65.23%	64.63%
Marital Status				
Married	65.77%	69.44%	69.02%	71.12%
Widowed	33.58%	40.67%	43.1%	46.34%
Otherwise Not Married	48.78%	52.25%	50%	58.12%
Gender				
Male	79.5%	79.86%	77.35%	77.84%
Female	35.45%	44.36%	49.6%	51.7%
Age				
60 - 64	67.52%	74.64%	71.19%	69.93%
65 - 69	58.82%	65.48%	66.08%	68.41%
70 - 74	46.44%	51.73%	57.66%	62.92%
75 - 79	37.33%	40.77%	50.71%	51.26%
80 - 89	28.76%	29.86%	33.73%	40.92%
90 and Older	11.76%	14.72%	23.1%	36.12%

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

TABLE A-3
Living Arrangements of the Vietnamese Population
Percentages Across Demographic Categories

	1992/93	1997/98	2002	2004
Percentage of Total Population Living in Each Type of Household				
No Elderly	67.77%	65.99%	70.03%	68.78%
Elderly Head with Nonelderly	18.78%	18.4%	19.62%	20.18%
Dependent Elderly	12.3%	13.75%	8.64%	8.99%
Only Elderly	1.14%	1.86%	1.72%	2.05%
Percentage of Elderly Living in Each Type of Household				
Elderly Head with Nonelderly	59.36%	54.92%	63.39%	61.61%
Dependent Elderly	27.21%	27%	18.04%	17.72%
Only Elderly	13.43%	18.39%	18.57%	20.67%
Percentage of Elderly Living in Each Type of Household (More Detail)				
Only One Elderly Person	3.47%	4.93%	5.29%	5.62%
Only Elderly Married Couple	9.48%	12.73%	12.48%	14.41%
Other Group of Only Elderly	0.49%	0.73%	0.8%	0.63%
Elderly Spouse of Nonelderly	2.59%	2.26%	2.59%	2.28%
Elderly Head, Unmarried Son	6.64%	7.12%	7.14%	8.23%
Elderly Head, Married Son	9.82%	10.67%	15.91%	4.11%
Elderly Head, Unmarried Daughter	6.4%	5.5%	7.2%	5.99%
Elderly Head, Married Daughter	1.42%	1.41%	2.23%	1.3%
Elderly Head with Multiple Children	27.8%	23.62%	23.5%	35.54%
Elderly Head, Other Situation	4.69%	4.34%	4.81%	4.53%
Elderly Dependent, Unmarried Son	1.03%	0.91%	0.45%	0.27%
Elderly Dependent, Married Son	17.73%	17.59%	14.27%	13.3%
Elderly Dependent, Unmarried Daughter	1.95%	2.3%	0.9%	0.79%
Elderly Dependent, Married Daughter	1.03%	1.53%	1.2%	1.43%
Elderly Dependent, Grandchildren	0.68%	0.74%	0.82%	1.09%
Elderly Dependent, Other Situation	4.79%	3.63%	0.41%	0.49%
Only ONE Elderly Person (Living Alone)				
Male	15.49%	18.4%	24.32%	18.84%
Female	84.51%	81.6%	75.68%	81.16%
Rural	80%	82.91%	82.85%	77.94%
Urban	20%	17.09%	17.15%	22.06%

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

TABLE A-4
Working Status of the Vietnamese Population
Percentage of Individuals Engaging in Work Across Demographic Categories,
For those aged 20 and older

	1992/93 VLSS		1997/98 VLSS		2002 VLSS		2004 VLSS	
	Age 20 - 59	Age 60+	Age 20 - 59	Age 60+	Age 20 - 59	Age 60+	Age 20 - 59	Age 60+
Region								
Red River Delta	85.8%	43.4%	89.7%	51.1%	92.5%	47.7%	91.9%	48.4%
North East	90.1%	44.2%	91.6%	42.6%	94.9%	49.3%	93.5%	51.4%
North West	89.3%	48.6%	93.3%	53.7%	96.3%	45.5%	96.1%	46.9%
North Central Coast	89.2%	58.7%	91.1%	51.6%	94.3%	51.7%	90.8%	48.2%
South Central Coast	82.2%	36.8%	87.9%	51.0%	91.8%	58.9%	89.5%	54.6%
Central Highlands	91.0%	51.2%	94.4%	45.6%	94.7%	50.3%	92.0%	39.5%
South East	76.0%	34.9%	78.6%	33.6%	85.3%	26.2%	83.6%	28.3%
Mekong River Delta	82.3%	44.1%	85.7%	43.7%	90.0%	41.3%	88.7%	38.8%
Urban / Rural Status								
Rural	86.0%	47.4%	90.2%	50.0%	94.2%	50.5%	92.7%	49.1%
Urban	78.1%	32.2%	79.3%	33.5%	83.7%	28.0%	82.6%	29.8%
Marital Status								
Married	85.2%	52.5%	90.0%	56.2%	94.9%	55.8%	94.0%	54.9%
Widowed	76.5%	27.1%	80.8%	27.4%	86.8%	27.1%	86.5%	26.3%
Otherwise Not Married	79.2%	38.1%	79.9%	49.8%	80.0%	52.1%	76.6%	40.0%
Gender								
Male	86.5%	49.7%	88.8%	51.6%	93.5%	50.8%	92.1%	50.6%
Female	81.2%	39.0%	86.1%	41.5%	89.6%	41.2%	87.6%	39.2%
Age Range								
60 - 64		61.1%		66.3%		66.2%		64.5%
65 - 69		48.8%		52.3%		57.4%		56.9%
70 - 74		34.1%		38.5%		40.8%		39.8%
75 - 79		19.5%		25.9%		26.0%		27.8%
80 - 89		8.2%		8.7%		9.7%		10.1%
90 and Older		0.0%		0.0%		3.2%		1.8%
Household Elderly / Nonelderly Mix								
No Elderly	84.5%	---	87.9%	---	91.9%	---	90.3%	---
Elderly Head with Nonelderly	78.9%	51.4%	83.8%	57.2%	88.9%	48.7%	86.9%	46.8%
Dependent Elderly	86.5%	18.0%	89.9%	15.0%	92.7%	16.0%	90.7%	12.9%
Only Elderly	---	60.7%	---	56.0%	---	62.1%	---	61.2%

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

TABLE A-5
Housework Among the Elderly of Vietnam
Percentage of Elderly Engaging in Housework Across Demographic Categories,
Followed by Mean Hours of Housework per Day,
Conditional on Doing Housework

	2002 VHLSS		2004 VHLSS	
	Housework?	Hours	Housework?	Hours
Region				
Red River Delta	72.5%	2.17	73.4%	2.20
North East	71.5%	2.09	75.2%	1.94
North West	65.4%	2.14	68.5%	1.81
North Central Coast	69.6%	2.11	71.1%	2.02
South Central Coast	71.5%	1.95	70.9%	1.96
Central Highlands	67.1%	2.30	63.3%	2.09
South East	57.9%	2.73	68.3%	2.40
Mekong River Delta	56.2%	2.35	57.9%	2.26
Urban / Rural Status				
Rural	68.6%	2.15	69.4%	2.32
Urban	58.2%	2.57	66.5%	2.10
Marital Status				
Married	70.6%	2.14	73.8%	2.10
Widowed	58.4%	2.40	59.5%	2.24
Otherwise Not Married	72.7%	2.42	78.1%	2.41
Gender				
Male	56.9%	1.87	60.1%	1.80
Female	73.2%	2.45	74.7%	2.36
Age Range				
60 - 64	81.4%	2.36	84.2%	2.39
65 - 69	74.5%	2.26	77.5%	2.15
70 - 74	67.7%	2.15	68.3%	2.04
75 - 79	56.2%	2.07	63.8%	1.85
80 - 89	31.3%	2.03	36.3%	1.97
90 and Older	17.7%	2.09	12.9%	1.62
Household Elderly / Nonelderly Mix				
Elderly Head with Nonelderly	66.6%	2.27	69.8%	2.16
Dependent Elderly	45.8%	2.15	44.6%	1.90
Only Elderly	84.7%	2.17	85.2%	2.23

Source: Authors' calculation from VHLSS 2002 & 2004

TABLE A-6
Housing Conditions for the Vietnamese Elderly
Percentage of the Elderly Household

	1992/93	1997/98	2002	2004
Housing Structures				
Villas	---	---	---	0.18%
House with private bathroom, kitchen & toilet (BKT)	4.11%	6.33%	7.54%	6.85%
House with shared bathroom, kitchen & toilet (BKT)	1.91%	1.93%	8.66%	10.51%
Semi-permanent house	52.57%	62.57%	64.47%	63.63%
Permanent house	12.16%	8.19%	---	---
Temporary	29.25%	20.98%	19.33%	18.83%
Sources of Drinking & Cooking Water				
Private water tap	10.24%	11.17%	12.03%	14.72%
Public water tap	2.87%	3.08%	4.05%	3.31%
Deep drill well	3.36%	18.51%	27.22%	22.29%
Hand-dug constructed well (various types)	51%	33.22%	31.95%	32.38%
Bought water	---	---	0.59%	0.45%
Filtered spring water	---	0.28%	0.85%	0.55%
River, lake, and pond	18.5%	9.91%	9.66%	7.49%
Rain water	13.2%	10.62%	9.13%	9.95%
Other	1.09%	13.21%	4.52%	8.86%
Toilet Usage				
Flush toilet with septic tank	12.81%	15.5%	18.68%	25.44%
Suilabh	--	---	3.44%	3.18%
Double vault compost latrine	10.98%	12.79%	22.75%	21.24%
Toilet directly over water	--	9.13%	12.83%	11.56%
Other (Simple toilet)	55.78%	45.69%	25.84%	24.13%
No toilet	20.43%	16.89%	16.46%	14.45%
Sources of Lighting				
Electricity	52.13%	80.67%	86.73%	93.8%
Battery lamps	0.49%	1.16%	1.62%	0.6%
Gas, oil, and kerosene lamps	46.49%	17.33%	9.77%	4.23%
Other	0.59%	0.84%	1.88%	1.37%

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

TABLE A-7
Official Poverty Rates for the Vietnamese Population
Percentages Across Demographic Categories

	1992/93 VLSS		1997/98 VLSS		2002 VLSS		2004 VLSS	
	Nonelderly	Elderly	Nonelderly	Elderly	Nonelderly	Elderly	Nonelderly	Elderly
Population								
Total	58.4%	48.9%	38.3%	29.5%	29.2%	25.4%	19.4%	17.9%
Aggregate	57.6%		37.4%		28.9%		19.3%	
Region								
Red River Delta	62.0%	54.8%	29.3%	23.8%	22.4%	22.6%	11.7%	16.3%
North East	79.2%	74.3%	56.6%	47.4%	38.6%	37.2%	29.7%	25.2%
North West	81.6%	70.3%	73.0%	78.5%	68.4%	63.7%	58.9%	53.2%
North Central Coast	75.2%	67.4%	49.7%	34.7%	44.5%	38.3%	32.0%	31.2%
South Central Coast	48.0%	40.0%	34.8%	31.3%	25.1%	26.7%	18.7%	21.6%
Central Highlands	61.8%	53.7%	58.0%	56.8%	52.2%	44.7%	30.6%	24.1%
South East	41.0%	27.3%	14.1%	7.8%	10.9%	7.2%	5.6%	2.8%
Mekong River Delta	48.2%	34.5%	37.7%	29.4%	23.9%	17.9%	16.0%	13.1%
Urban / Rural Status								
Rural	67.1%	58.1%	46.4%	37.0%	36.0%	31.2%	24.9%	22.8%
Urban	25.5%	19.6%	9.3%	7.9%	6.7%	6.2%	3.6%	4.3%
Marital Status								
Married	56.9%	47.8%	35.8%	27.4%	26.7%	24.8%	17.2%	15.8%
Widowed	53.6%	50.6%	34.7%	33.5%	27.2%	26.6%	20.0%	21.3%
Otherwise Not Married	50.1%	54.8%	31.9%	22.9%	31.1%	23.9%	15.5%	16.9%
Gender								
Male	58.6%	48.3%	37.9%	27.5%	28.6%	24.2%	19.1%	16.4%
Female	58.1%	49.4%	38.7%	30.9%	29.8%	26.3%	19.7%	18.9%

Source: Authors' calculation from VLSS 1992/93 & 1997/98, and VHLSS 2002 & 2004

Seeking for Effective Performance, Minimum Cost, and Good Official Development Assistance (ODA) Performance Evaluation: A Case Study of Bach Mai Hospital, Vietnam

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Abstract

According to the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD), the amount of official development assistance (ODA) has been resurging since 2000 and is expected touch over 100 billion USD in a few years. In 2006, the DAC members' average ratio of ODA to gross national income (GNI) nearly touched 0.30, which corresponds to the level in the early of 1990s. When providing ODA to developing countries, the regional characteristics, diversity of the economic growth stage, as well as the impacts of ODA on economic growth have to be duly taken into consideration. In this paper, the author mentioned that Vietnam exhibits a relatively better economic performance than the other East Asian countries. However, based on data analysis, the author observed a general tendency of developing countries: the higher a nation's economic growth the lesser is its dependency on aid. A national budget that depends heavily on aid does not always guarantee a sustained high economic growth rate year after year in developing countries. In order to achieve the effective use of ODA, it is also necessary to determine an appropriate method for evaluating ODA projects in developing countries. In the latter part of this paper, the author briefly examines a case study of Bach Mai Hospital (BMH) in Hanoi, Vietnam and concludes that good leadership would generally lead to the successful execution of a project undertaken. It is well known that BMH played a pivotal role during the outbreak of severe acute respiratory syndrome (SARS) in March 2003, and owing to the immediate action taken by the hospital, Vietnam was promptly declared SARS-free by the WHO on April 28, 2004. The main objective of this ODA project was to improve the staff's medical skills and knowledge in addition to promoting cooperation among them during the 2003 SARS outbreak. However, there still appears to be scope for analysis and drawing lessons in developing general methods for the more efficient use of ODA. The author also believes that analyzing case studies of past ODA projects would bring a considerable amount of useful information that could improve the future quality of ODA.

1. Introduction

　　The initiation of the disbursement of official development assistance (ODA) from developed counties was sluggish in the 1990s; this phenomenon is known as "aid fatigue.[1]" As shown in Figure 1, the average ratio of ODA to gross national income (GNI) among the Development Assistance Committee (DAC) countries of the Organization for Economic Cooperation and Development (OECD) decreased from 0.34% in 1984–1985 to 0.22% in 2000. In response to this negative ODA disbursement, each developed country is seeking new strategies for improving the quality of ODA projects. In the United States, ODA is disbursed in the following five modes: (1) economic support fund, (2) development assistance, (3) the food for peace program, (4) human support aid, and (5) multinational aid[2]. In Japan, however, ODA disbursement is primarily considered to be a friendly donation to developing countries. For example, as is well known, the United States is requesting the Japanese government to reduce its ODA to Myanmar as an economic punishment for the latter's non-democratic policy. However, the Japanese government is concerned that the imposition of economic sanctions on Myanmar would isolate the country and cause negative counter effects[3]. After World War II, Japan—then a developing country—secured a loan from the World Bank. In 1990, it managed to repay the entire loan amount[4]. This incident is a relatively recent one; therefore, the Japanese government is able to empathize with the condition of a country that is provided with such loans and is willing to cooperate in finding an approach that is beneficial for both the donor and recipient countries. For achieving this purpose, the author maintains that supporting and monitoring leadership in projects undertaken in developing countries is important. In order to simplify and elucidate this point, the author introduces "The Bach Mai Hospital Project" as a case study later in this paper; this project is considered as an example of a successful ODA project in recent years[5]. The subsequent section describes some characteristics of the relationship between aid and the regional characteristics, economic growth, and the nutrition level of the world and the Vietnam economy. Section 3 provides a brief history of the projects related to Bach Mai Hospital (BMH) and also describes the importance and effectiveness of leadership in a project team, by means of theoretical and statistical tools. This is expected to motivate all the members to participate in these projects and facilitate good performances by them. The final section summarizes the conclusion and also mentions what remains to be studied in the future.

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[1] At the Monterrey Conference held over March 18–22, 2002 at Monterrey, Mexico, the issues of trade, aid, debt, and the coherence of global and regional financial structures were discussed, with respect to the achievement of the MDGs. The World Bank also recognized the importance of the efficiency of ODA and poverty reduction. Since the conference, the amount of ODA has surged under the new ODA strategy of "Institution, Ownership, and Participation."

[2] See also Nisigaki, Shimomura and Tuzi [2003] for more details.

[3] However, there is also another opinion that the Japanese government did impose some degree of economic punishment on Myanmar and maintained a low rate of ODA to Myanmar.

[4] This aid is known as the GARIOA (Government Appropriation for Relief in Occupied Area Fund) and EROA (Economic Rehabilitation in Occupied Areas) funds. For six years from 1946 through 1951, Japan received this fund to initiate the reconstruction of its devastated economy after World War II.

[5] As mentioned in section 3, this project is actually titled "The Bach Mai Hospital Project for Functional Enhancement." Note that there have been other projects undertaken by Bach Mai Hospital in the past and even at present, as can be seen in Table 1.

2. The relationship between economic growth, nourishment, and aid dependency

In 2003, over 70 billion dollars was transferred from developed to developing countries, with bilateral aid accounting for 53.6 billion USD, and multi-lateral aid for 20.6 billion USD. According to the report of the DAC on the OECD, the amount of ODA appears to increase over a decade, as we can see in the figure below. However, the amount of ODA measured in terms of the ratio of GNI is far from the 0.7% targeted by the United Nations for its Millennium Developing Goals (MDGs). Therefore, in order to utilize the limited ODA funds at the maximum efficiency level, a certain strategy should be built for delivering ODA to developing countries in an effective manner. The MDGs, which were declared in September 2000, outline the following eight main goals to be achieved by 2015: (1) eradication of extreme poverty and hunger; (2) achievement of universal primary education; (3) promotion of gender equality and empowerment of women; (4) reduction of child mortality; (5) improvement of maternal health; (6) combating HIV/AIDS, malaria, and other diseases; (7) ensuring environmental sustainability; (8) development of a global partnership for development.

Figure 2: The time series trend of ODA and the estimated ODA disbursements until 2010

2.1. World Economic growth, nourishment, and aid dependency in 2003

There is no clear statement regarding economic growth in the MDGs. However, as we were already aware, if developing countries find it difficult to maintain good health and nutrition levels, they will be unable to develop human resources for industrialization. Moreover, in this era of globalization, developing countries are required not only to manage local enterprises and transfer modern technology into enterprises in their own domestic market but also to counter the severe competition in the global market. This does not intend for developing countries to depend heavily on aid in the achievement of these aims. Further, cross data reveals a negative relation between economic growth and aid dependency, as seen in the next figure. The economic growth of two areas, namely, "East Asia and the Pacific" and "South Asia," is relatively higher than that of the other areas. However, in the case of nutrition levels, the living standard of the East Asia and Pacific region appear to be better than that of South Asia. It is interesting to categorize each area by its own regional characteristics such that they provide certain clues to build an aid strategy.

Figure 3: Negative relation between GDP growth and ODA dependency

In the above figure, we can find useful fundamental facts pertaining to each area. First, the point denoting that economic growth of the area of EU and Central Asia is an outlier. This is because the Commonwealth of Independent States (CIS) and the East European countries in this area have been facing economic hardships since their independence from the former Union of Soviet Socialist Republics (USSR). The line in the figure depicts the linear regression, estimated for five areas except that of EU and Central Asia. Next, we can observe a relation between undernutrition and aid dependency in the same way.

Figure 4: Positive relation between poor nutrition levels and ODA dependency

From the above figure, we can find that the nutrition levels of three areas—"EU and Central Asia," "East Asia and the Pacific," and "Middle east and North Africa"—is better than that of others. One the other hand, South Asia is relatively worse in this respect as compared with the other areas. We also found that sub-Saharan Africa scores extremely low at both economic growth and nutrition levels. By measuring the distance from the average level of economic growth and nutrition, which is drawn as a linear regression in figures 3 and 4, at the same level of aid dependency in the figure, we also found that the areas of EU and Central Asia and South Asia were plotted at a considerable distance from the average figure for the world. It is known that the United Nations has been arguing for the absolute increase of donation to sub-Saharan Africa. The author agrees with the idea; however, from the viewpoint of aid dependency, a serious issue is that of the devastated economies of CIS and East Europe. With regard to South Asia, we have to consider other aspects in addition to economic growth. "Why is South Asia unable to achieve better nutrition levels with its high economic growth?" It is crucial that ODA donors and the governments of South Asian countries cooperate and take advantage of their good economic performance to achieve better nutrition levels and higher living standard. Later in this paper, the author shows that ODA projects would be executed effectively under good leadership.

Before proceeding to the next section, based on figures 3 and 4, the author summarizes and illustrates another figure describing the relation between economic growth and nutrition levels. The next figure provides some interesting perspectives for achieving the efficient use of the limited ODA funds: (1) Increasing the absolute amount of aid to sub-Saharan Africa is the highest priority in coming decades. (2) Supporting EU and Central Asia in their endeavor to recover their political stability and economic growth should be given high priority. (3) Studying how to allocate aid efficiently and equalize the nutrition level across the population is a must. (4) Latin America and the Caribbean might have some structural problem causing vicious circle between poor nourishment and low economic growth.

Figure 5: Positive relation between poor nutrition levels and economic growth

Note that the above four-area classification shows that each area has its own characteristics. Thus, it is clear that we have to first recognize the diversity of the regional characteristics and then consider them in developing the most effective and useful method of allocating aid. Based on the facts provided here and some additional details, the author will review the relation between economic growth, nourishment, and aid dependency by using the available data on 83 developing countries.

2.2. Vietnamese economic growth, nourishment, and aid dependency in 2003

In this section, the author presents a figure showing additional detail on the relation between economic growth and aid dependency based on the available data on 83 developing countries. According to the World Bank's World development Indicators in 2003, the area of East Asia and the Pacific comprises 10 developing countries. As seen in the next figure, each country in East Asia and the Pacific—including Vietnam—has a relatively better economic growth and nutrition level than the other countries.

Figure 6: Negative relation between GDP growth and nutrition levels

Since Vietnam is located above the regression line drawn in the figure, we know that Vietnamese economic growth is relatively higher than the average. Now, the author maintains that it is time for Vietnam to pay greater attention to improving the nutrition level so as to achieve a higher quality of living standard for people and better welfare. It is also interesting to see how the relation between economic growth and the nutrition level would change with an increase in aid dependency. For this purpose, the author fixed aid dependency against the odds ratio of economic growth to nutrition levels and plotted it on the horizontal line in the figure below.

Figure 7: Ratio of economic growth to nutrition levels with aid dependency

Note that the odds ratio is expressed as $\dfrac{\pi(x+1)/1-\pi(x+1)}{\pi(x)/1-\pi(x)}$. $\pi(x)$ is defined as a function of aid dependency x.

If country *i* is located beyond the regression line in figure 6, then $\pi = 1$.

$$\text{Otherwise, } \pi = 0$$

From the figure, we can easily imagine, that the value of logit $\ln\left[\dfrac{\pi(x)}{1-\pi(x)}\right]$ is negative because of it decreases toward the right. Interestingly, the figure shows that the heavier the aid

dependency, the lower the economic growth and the poorer the nutrition level. First, the result of this estimation of the logit model shows that as aid dependency increases, the odds ratio changes to –0.048% [6]. In addition, we can compare the estimated $\pi/1 - \pi$ with the corresponding observed data. In 2003, Vietnamese aid dependency was 4.4, and the estimated ratio of $\pi/1 - \pi$ is 0.0517. The observation of the odds ratio is 0.0857 as large as more than 1.6 times, as shown in figure 7. This fact implies that the Vietnamese economy grew too fast in the 1990s, and on the other hand, it did not appear much concerned about improving its poor nutrition level. China, Thailand, and Papua New Guinea also have a relatively large gap between the estimated value and observation of the odds ratio, at 3.9, 1.9, and 2.11 times, respectively. On the other hand, the odds ratios of other countries in East Asia are well fitted with the observations. There exists a gap between the estimated value and observation of the odds ratio, for instance, in the case of Philippines, it is 1.08; Indonesia, 0.86; Cambodia, 1.05; Laos, 1.03; Cambodia, 1.05; and Mongolia, 0.63. It is noteworthy that the author mentions this with respect to the aid dependency of Vietnam and does not state that Vietnam did not undertake any health care projects in 2003. In the next section, the author introduces a famous health improvement ODA project undertaken at Bach Mai Hospital and provides a theoretical framework to show that "Good leadership brings about good results of projects at the minimum cost."

The Vietnamese government undertook a strong political and economic reform known as "Doi moi" in order to transform the Vietnamese economy into a market-oriented economy. Due to this, Vietnam has been enjoying a good macroeconomic performance for nearly two decades since 1986. However, some of the abovementioned facts convey a need to rethink the ODA strategy of Vietnam in coming years. This is particularly important in order to prevent the gap between the relatively high economic growth and the poor nutrition levels from the level of aid dependency, particularly since the amount of aid is expected to increase in coming years. This might also influence the Vietnamese national strategy for higher living standard and the achievement of the MDGs by 2015. The author also insists that from the viewpoint of the evaluation of ODA projects, there is an urgent need for an answer to the following question: "Under what conditions do ODA projects perform well?" In this regard, the author only examines the economic role of leadership in addition to conducting statistical tests in the case study of BMH in Hanoi, Vietnam.

3. Case study: The Bach Mai Hospital Project for Functional Enhancement

This section outlines the history of the BMH project along with a background of related

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[6] The coefficient of the logit model of simple regression is –0.048, the p-value is 0.0017, and R^2 is 0.429. Additional details on this result are available from the author.

projects undertaken in Vietnam. As shown in Table 1, some top referral hospital programs were conducted prior to the initiation of the project under consideration. These include the Project for the Rehabilitation and Upgrading of the Cho Ray Hospital (1992–1994), the Project for Improvement of Medical Equipment at the Hai Ba Trung Hospital (1993–1994), the Project for Improvement of Medical Equipment in Hanoi City (1993–1994), and the Project for Improvement of the Bach Mai Hospital (1997–2000). Therefore, prior to the BMH project (2000–2005) that was undertaken to combat severe acute respiratory syndrome (SARS), basic knowledge and medical skills regarding health care had already been established in Vietnam. In this project (2000–2005), expert guidance on nosocomial infection control was imparted from the viewpoint that the prevention of nosocomial infection is vital for improving the quality of medical service. The outbreak of SARS, a disease previously unknown to human beings, in Vietnam in late February 2003 was accompanied by numerous cases of nosocomial infections in local hospitals. However, all infected patients were transferred to BMH; the hospital isolated these patients and undertook intensive measures against nosocomial infections. As a result, further nosocomial infections and secondary spreads were successfully prevented. This led to the end of the SARS outbreak, and Vietnam became the first country to be declared a SARS-free nation by the WHO[7].

Table 1: History of the projects undertaken at Bach Mai Hospital and Vietnam as a whole

In economics, this type of knowledge and technology utilization for preventing a secondary spread of SARS is referred to as an externality. Before the first BMH project in September 1997, the hospital lacked medicines and medical tools; moreover, it required extensive repairs. BMH, which was established in 1911, contributed medical services in the northern region of Vietnam[8]. Back then, it was one of the largest general hospitals across 31 northern provinces in Vietnam. It had 1,390 beds and served approximately 25 million people—34% of the total Vietnamese population. However, in the 1980s, BMH faced serious problems such as obsolete facilities, deteriorating levels of medical services, and lack of medicines. In October 1996, the Vietnamese government set up a master plan that aimed to provide high-quality medical services. As shown in Table 1, from September 1997 to January 2000, a project was undertaken by the Japanese government's Grand Aid Cooperation.

3.1. Re-evaluating the BMH project with respect to the role of leadership

This section provides a basic introduction to the methodology for analyzing the successful execution of the BMH project. The importance of leadership and the active involvement of all the members in ODA projects need to be reiterated. In additional, whether or not the successful execution of a project depends on good leadership can be explained in

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[7] For additional details, see Ohara and Tateno [2005].
[8] For additional details, see Ohara and Ikari [2002]

detail from the viewpoint of economics. In this case, it is assumed that the project leader is more experienced than the senior staff and the least-experienced junior staff. Further, it is assumed that the experience values for a leader, senior, and junior are 3, 2, and 1, respectively. Thus, the education cost can be expressed by a linear function as a certain fixed cost c_0 minus the experience value. Here, the project team comprises a project leader, two senior staff, and three junior staff. In order to execute the projects successfully, achieving a consensus among team members is important. Further, the consensus and cooperation costs increase with the number of participating members. Under these conditions, when a leader exhibits good leadership and initiates participation in the project, the motivation of the other members—the two seniors and three juniors—and the effectiveness of the project is positively influenced. The figure shown below illustrates a generalized situation; specific cases will be illustrated later.

Figure 8: Member participation and arrangement cost

In the above figure, the education cost is calculated as the fixed cost c_0 minus the experience value. For example, the education cost for a leader with an experience value of 3 is calculated as follows.

Leader's education cost = c_0 – value of experience

$$= 10 - 3 = 7$$

Note that in this case, c_0 is assumed to be 10. It is also assumed that the consensus cost is equal to the number of members participating in the project. In the above standard case, if the leader exhibits good leadership and the senior and junior members support the leader, the total cost will reach a minimum level, as indicated by the dashed line in the next figure; this will imply that the project is being executed efficiently. In this case, the minimum total cost is 6 as well as arrives in the early stage of the project. It should be noted that in addition to leadership, the cooperation and incentives of senior members are also important. This point will be illustrated later. In addition, note that the education cost of juniors is standardized to one, which is equal to the marginal cost of the consensus—the additional cost incurred with the participation of a new member in the project. Therefore, once the total cost reaches the minimum level, it remains constant.

Figure 9: Example of member participation and arrangement cost

At this point, two inefficient cases have been presented. In the first case, the leader is not interested in the project and exhibits poor leadership despite the fact that he or she is the most experienced in the team. In this case, the minimum total cost is 8.

Figure 10: Case I -- Leader exhibits poor leadership

In the second case, the leader exhibits good leadership but the seniors in the team show lesser interest in the project despite the fact that they are more experienced than the juniors. In this case, the minimum total cost is 7.

Figure 11: Case II -- Leader exhibits good leadership
but seniors show less interest due to lack of incentives

In all the three cases described above, if each member begins his or her job, he or she will work efficiently. However, delays in the beginning and late participation of a leader or senors in a project have a severe effect on the total project cost, thereby lowering the assessment of the entire team. In any ODA program conducted in developing countries, it is preferable that the donors prepare a project team supervised by a good leader and supported by a cooperative system comprising senior specialists who can motivate and educate junior members. For ODA donors, assessing the ability of the leader and team cooperation should be the key aspects for determining whether funds would be provided and for evaluating the project performance. In Vietnam, people are culturally and historically inclined toward respecting seniors and specialists in society, particularly in an academic or university setting. In my opinion, a hospital resembles a university in certain aspects in that a hospital has well-organized leaders in doctors and seniors who possess specialized knowledge and expertise. Moreover, these seniors are capable of educating juniors in a manner that they gain social respect. In my opinion, one of the reasons for the successful control of SARS by BMH in 2003 is the healthy relationship shared among all the hospital members as well as the Japanese supporter of ODA to educate BMH appropriately through projects.

3.2. Empirical proof and statistical test of the role of leadership

It is difficult to empirically verify that good leadership improves the allocation of aid at minimum cost, because we would need more time to conduct a field research, sample more observations, and collect new resources for this purpose. However, it is possible to statistically test the relation between good leadership and the high performance of aid. The next figure taken from the report on the BMH project by Japan International Cooperation

Agency (JICA) in 2004 shows that the number of trainees at BMH increased over a span of 3 years from 2001 to 2003 by more than 2.5 times, to a cumulated total of 1,517 people. At the same time, the marginal cost of one trainee per day decreased from 4.01 to 2.93 dollars by 26.9%. This fact tells us that the efficiency of training might have increased with learning by doing through the experience at BMH. To analyze this in more detail, the author uses survey data from the same investigation report on this project.

Figure 12: Training cost incurred by BMH from 2001 to 2003

In practice, it is difficult to imagine or believe that every ODA project in history has been executed with perfect efficiency. In other words, there is always some scope for improvement in the current project in the future[9]. According to the evaluation report of JICA, there were reported to be unnecessary purchases of medical equipment that were seldom believed to be used efficiently[10]. This statement was made by a Japanese evaluating team on the BMH project. More interestingly, the report by Japanese experts of ODA evaluation is consistent with the responses in a questionnaire interview of counterparts including Vietnamese doctors, nurses, and staff of BMH on July 16th, 2004. In the questionnaire, they were asked about the result of the achievement output of the five-year ODA project. The answers are presented in the figure below.

Figure 13: Result of questionnaire on the achievement of the BMH project:
from 2001 to 2005

The questionnaire was returned by 32 counterparts from the BMH workers including doctors, nurses, and staff; the author considers five occupations[11]. An interesting point is that two sectors—"Equipment management" and "Training collaboration/nursing school"—have a relatively high "unachieved ratio" of 13% and 3% respectively. Based on the logic that a good leadership motivates positive participation among all the members in the program, a training course is expected facilitate the success of the project. From the other investigation of the project reported by JICA, we found that among 72 counterparts of BMH, only 3 managers of nursing schools were trained in the required knowledge and skill in Japan. Note that the report had no records of staff training from nursing schools in. On the other hand, as the next table shows, the average ratio of staff to managers in the entire program was 0.87, 0.82, and 0.73 for the years 2001, 2002, and 2003, respectively[12].

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[9] This "fault" or "failure" encourages renewed efforts to improve the quality and efficiency of ODA projects. It is important to continue our efforts to achieve higher quality of ODA in next stage.

[10] The cost of providing medical machinery is almost 2.7 million dollars, which covers nearly a quarter of the total aid cooperation money—11 million dollars—from January 10th, 2001 to January 9th, 2005. For more details, see JICA [2004].

[11] The questionnaire was distributed to 40 people, and 32 response sheets were returned; thus, the collection rate is 80%.

[12] The Bach Mai Hospital Project for Functional Enhancement was conducted from January 2001 to

Table 2: Contingency table of trained managers and staff in Japan: 2001 to 2003

The size of the management trained in the course was more than that of staff in general, and this figure gradually decreased over the three years. This also implies that the educational cost per additive staff decreased as the knowledge of managers was transferred to other counterparts and junior staff through face-to-face learning in the training course. However, in order to verify and analyze this, we should not draw conclusions only from the descriptive statistics presented in the figure. Statistical tests have to be conducted. In this case, "goodness fit test" is usually available; according to the author's calculation, the χ^2 statistic is 2.752 and the degree of freedom is 2. The result of this test states that there is no correlation between the rows and columns in table 2[13]. In other words, there is no statistical difference in the ratio of staff to managers, for three years from 2001 to 2003, although each ratio is separately given as 0.87, 0.82, and 0.73. According to the author, this "superficial" observation occurred partly because the data is not categorized into occupations. Therefore, in table 2, the author sorted the data on the total of 2,233 participants of the training program, and extracted only three occupations, doctors, nurses, and equipment as shown in the next table.

Table 3: Contingency table of trained manager and staff according to occupation: doctors, nurses, and equipment

The above table is a three-dimensional contingency table. Therefore, in the first case, a test is more complicated than in the previous case[14]. The author makes three hypothesizes, tests them, and reports the result as follows.

Test 1:

Null hypothesis H_0: Class (managers, staff) is independent from Occupation (doctors, nurses, and staff) and Year (2001, 2002, and 2003)

Result: The above null hypothesis is rejected with χ^2 statistic 153.4 and degree of freedom is 6.

The critical values of 1% and 5% are 16.8 and 12.5, respectively.

Test 2:

January 2005. Therefore, the data for 2004 is also available. However, the questionnaire on achievement, the results of which are presented in figure 13, was conducted on July 16th, 2004. Therefore, the author does not mention the number of trainees in 2004 since this has no relation with the result of the questionnaire.

[13] The critical values of 1% and 5% with degree of freedom 2 are 9.21 and 5.99, respectively.

[14] For more details, see Bishop *et al.* [1975]

Null hypothesis H_0: Occupation (doctors, nurses, and staff) is independent from Class (managers, staff) and Year (2001, 2002, and 2003)

Result: The above null hypothesis is rejected with χ^2 statistic 151.1 and degree of freedom is 8.

The critical values of 1% and 5% are 20.0 and 15.5, respectively.

Test 3:

Null hypothesis H_0: Year (2001, 2002, and 2003) is independent from Class (managers, staff) and Occupation (doctors, nurses, and staff)

Result: The above null hypothesis is **NOT** rejected with χ^2 statistic 8.18 and degree of freedom 8.

The critical values of 1% and 5% are 20.0 and 15.5, respectively.

The results of the above three tests imply that we could find statistical difference among occupations, but not for the years in which ODA was allocated from 2001 to 2003. Note that this result is consistent with the facts that we have already observed will all occupations in table 2. Therefore, now three-year data is piled up to make no difference and the table 3 is now merged into as below.

Table 4: Contingency table of trained managers and staff in Japan according to occupation: during 2001–2003

It is clear and interesting to recognize that the role leadership is different in terms of occupations but not in terms of the years consumed by training. The author insists that the ratio of staff to managers should have been changed in order to improve the efficiency of training by monitoring the project year after year. From this perspective, another finding is also noteworthy: the size of the staff in terms of equipment shown in table 3 is as much as six times as that of the management. Moreover, this situation remained unchanged for three years as we can see in table 3. In turn, both the ratio of staff to managers in the case of doctors as well as nurses kept on changing. Author believes that the ratio of staff to managers will be one of political tools to check the extent to the improvement of the project performance and, if necessary, be arranged such that the leader can perform his or her role efficiently in ODA projects.

4. Conclusion

In this paper, the author first overviews certain tendencies of ODA and argues it is time that governments revisit strategies to allocate the appropriate amount of aid into developing countries in the era of multipurpose, particularly in the light of the eight objectives outlined in the MDGs that are to be achieved by 2015. For this purpose, the author provides useful analytical methods to categorize the world-wide study area by three characteristics: economic growth, nutrition level, and aid dependency. Also, it is possible to apply this method of analysis even to a certain groups of countries or areas. In particular, the author hopes that this approach might be helpful to solve the problem of the efficient allocation of the limited amount of ODA funds.

Using world data, the author showed that an increasing aid dependency is related to the poor economic growth as well as poor nutrition levels of people in developing countries. It is also time for Vietnam, which enjoys relatively high economic growth, to begin considering a new strategy for a more balanced development between economic growth and the nutrition level. In the previous section, the author attempted to explain and illustrate the positive relationship between leadership and project performance at the minimum cost. This approach appears to be successful in analyzing the BMH project in Vietnam. However, this well-known project also suggests that there remains some scope for improving efficiency and for drawing lessons for the next project in the future. Further, the author confesses that an additional detailed investigation is necessary to obtain a more concrete conclusion and emphasizes that all data investigated in the past should be made accessible to researchers for data analysis. Despite these shortages of data as well as author's knowledge on all projects of ODA, the author believes that good leadership in a project helps build a cooperative atmosphere, one of the important and essential factors in achieving effective results in an ODA project. In addition, in an evaluation of ODA, investigating the leadership is possible and useful to check whether the project is proceeding efficiently or not. The author also hopes that this information that is based on simple logic can be helpful to both recipient and donor countries to collaborate, exchange opinions, and determine ways to improve ODA efficiency.

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Figure 1: Worldwide ODA trend: 1984–2000
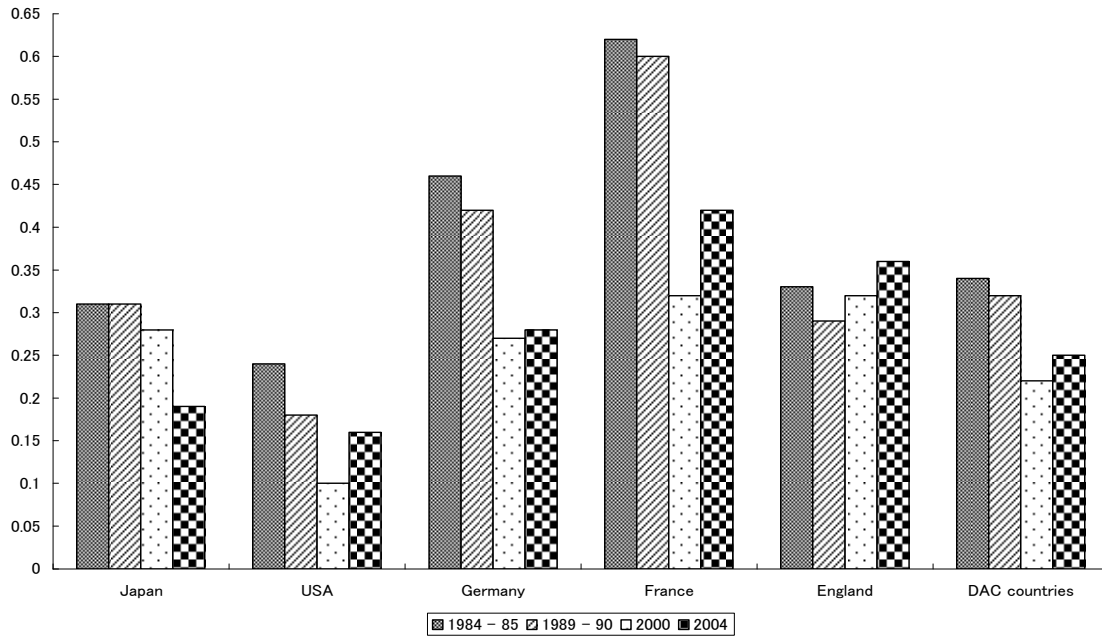
Source: Nisigaki, Shimomura and Tuzi [2003]; Tables 4–3; p. 120.

Original source: OECD, Development Cooperation, 2000. The average ratios for 1984–1985 and 1989–1990 have been used.

Figure 2: The time series trend of ODA and the estimated ODA disbursements until 2010
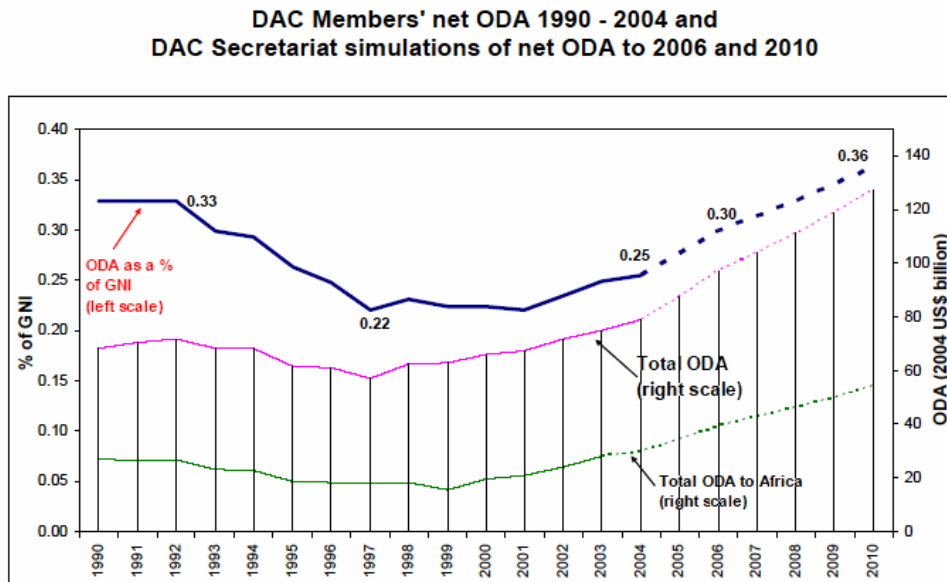
Source: OECD homepage http://www.oecd.org

Figure 3: Negative relation between GDP growth and ODA dependency
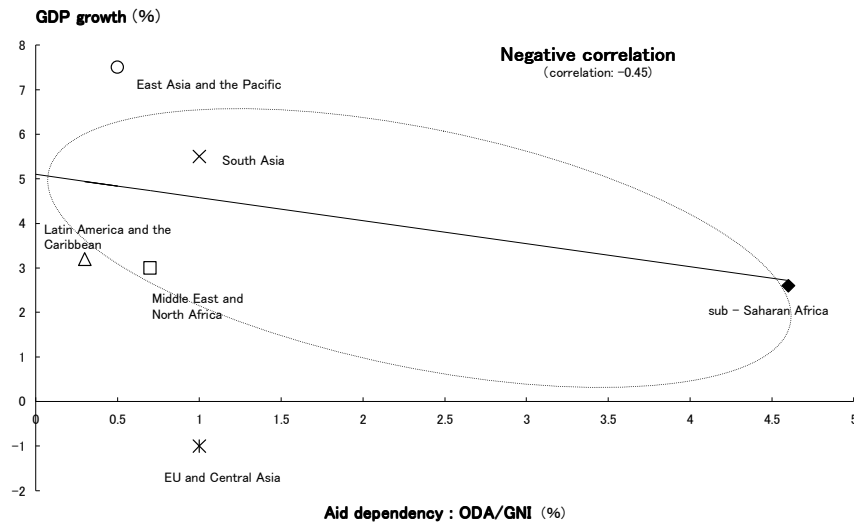
Source: World development indicators, World Bank, 2003.

Note: GDP growth is measured in terms of the change in GDP at constant prices. The average annual growth from 1990 to 2001 is used here. Aid includes official development assistance (ODA) and official aids, which is composed of grants and loans (net for repayments) that meet the criteria for ODA and are given to countries and territories in part II of the DAC list of aid recipients.

Linear regression: $y = 5.12 - 0.043X$, $R^2 = 0.221$

Figure 4: Positive relation between poor nutrition levels and ODA dependency
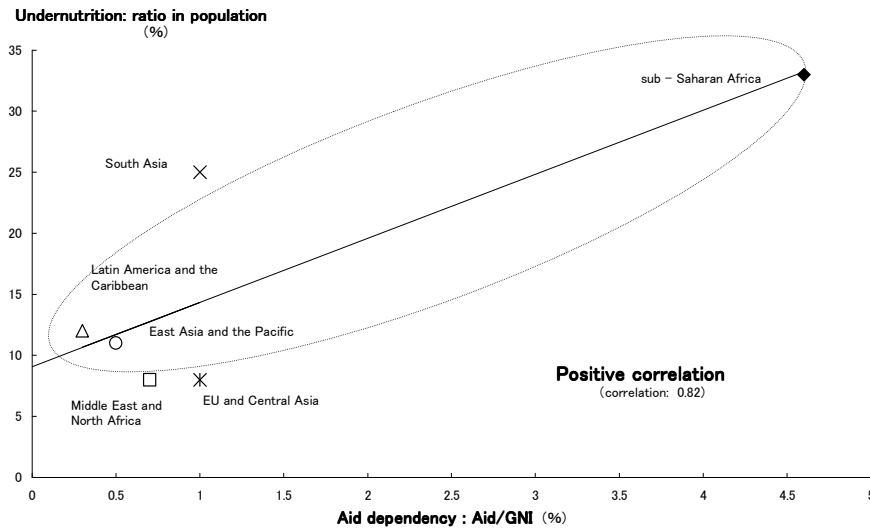
Source: World development indicators, World Bank, 2003.

Note: In the original source, data on undernutrition are produced by the Food and Agriculture Organization (FAO) based on the calories available from local food production, trade, and stocks; the number of calories required by different age and gender groups; the proportion of the population represented by each age group; and a coefficient of distribution to account for unequal access to food (FAO 2000).

Aid includes official development assistance (ODA) and official aids (see the note in figure 3).

Linear regression: $y = 9.07 + 5.25X$, $R^2 = 0.668$

Figure 5: Positive relation between poor nutrition levels and economic growth
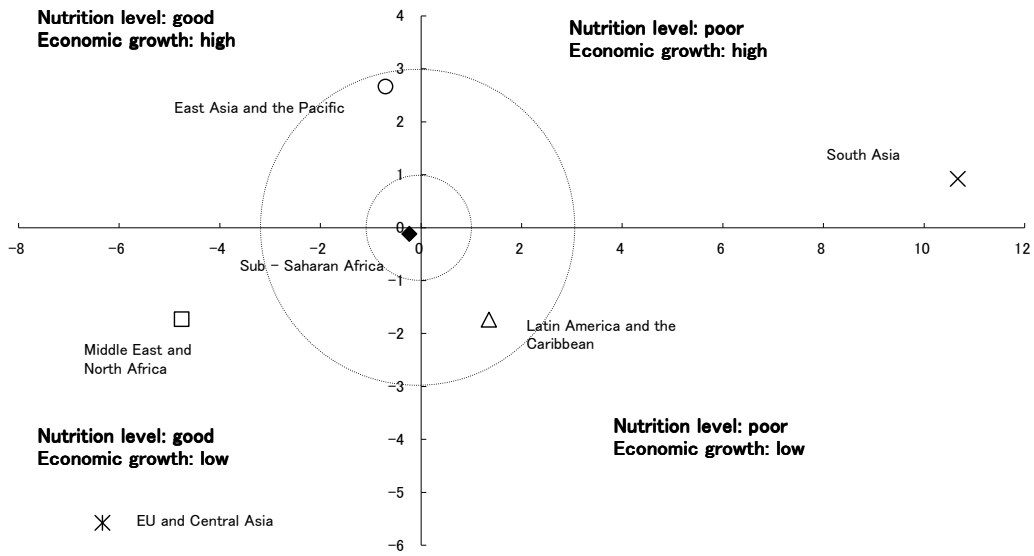
Source: World development indicators, World Bank, 2003.

Note: The data on each area is plotted from the residual of linear regression in figures 3 and 4. For instance, South Asia (10.92, 0.62), as we can easily observe, is plotted within the distance between the observation and estimated values of the linear regression in figures 3 and 4, respectively.

Figure 6: Negative relation between GDP growth and nutrition levels
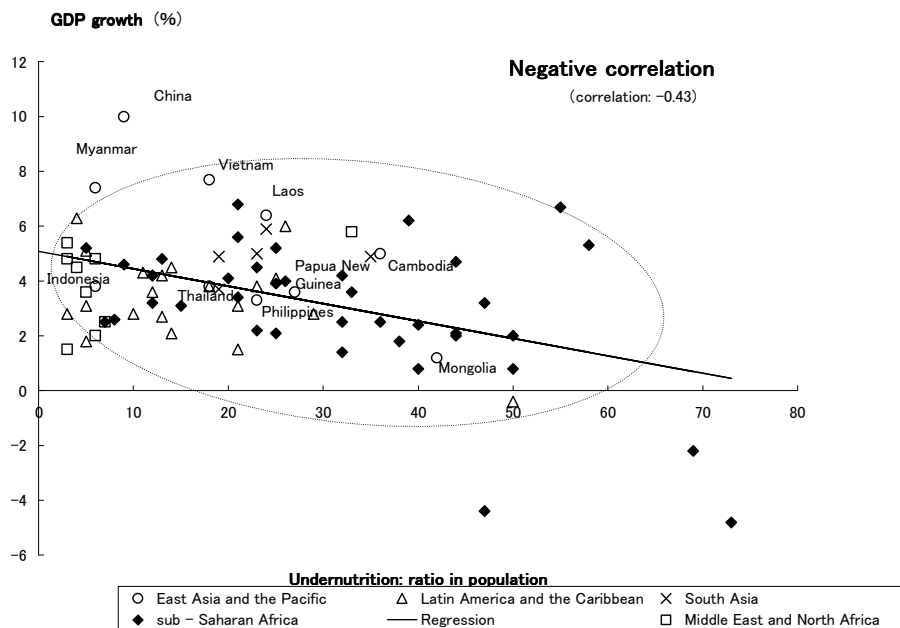
Source: World development indicators, World Bank, 2003.

Note: The scale of the area is same as that of figures 3, 4, and 5. The regression line is drawn based on the data on 83 countries excluding EU and Central Asia since the growth data of this area is an outlier point, as we mentioned earlier.

Linear regression: $y = 5.083 - 0.063X$, $R^2 = 0.203$

Figure 7: Ratio of economic growth to nutrition levels with aid dependency
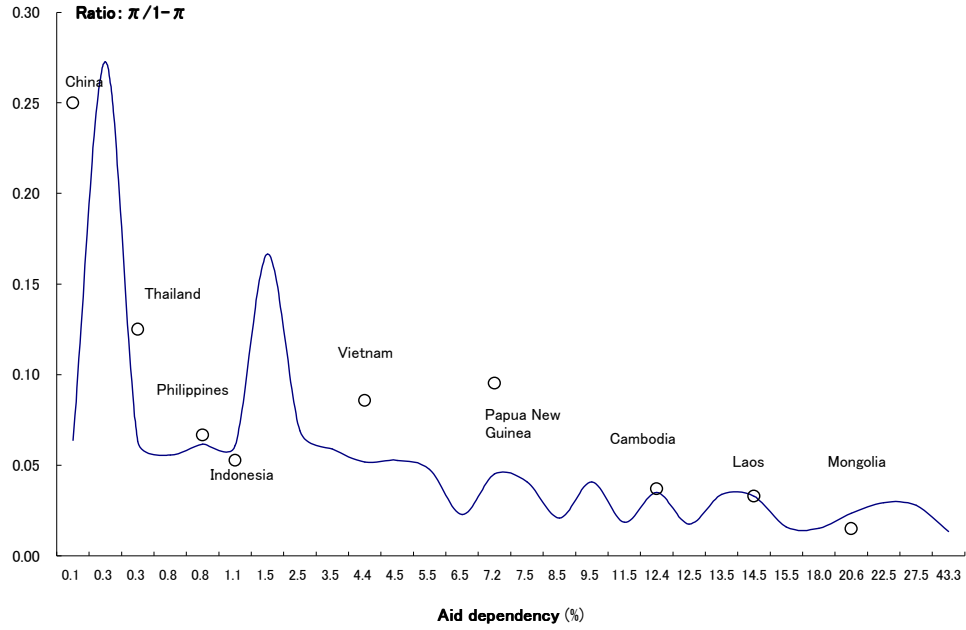
Data Source: World development indicators, World Bank, 2003.

Logit model regression: $Y = -2.74 - 0.048X$, $R^2 = 0.42$

(-13.50) (-3.67)

Note that Y represents logit $= \log(\pi/1 - \pi)$, and X aid dependency.

The value within parenthesis is the t-value, and the coefficients are significant at 5%.

Figure 8: Member participation and arrangement cost
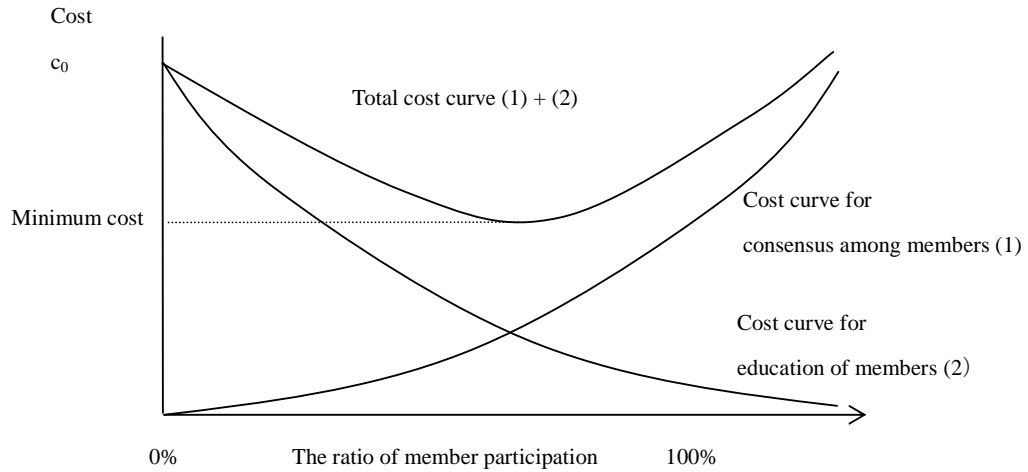
Original source: Imaoka [1998], Figure 2 in p. 209.

Figure 9: Example of member participation and arrangement cost

Total cost curve (1) + (2)

Cost curve for consensus among members (1)

Cost curve for education of members

○ Leader □ Senior □ Senior △ Junior △ Junior △ Junior
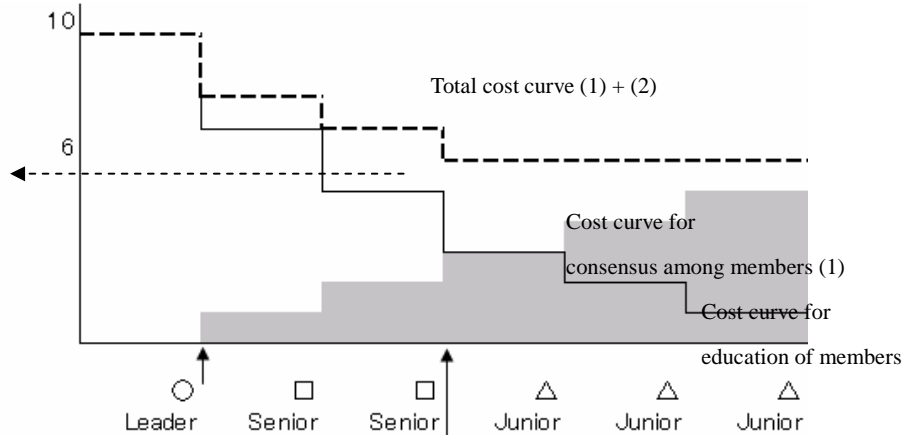
Source: This figure is adapted by the author from Imaoka [1998]. See also figure 8.

Figure 10: Case I
Leader exhibits poor leadership

△ Junior △ Junior △ Junior □ Senior □ Senior ○ Leader
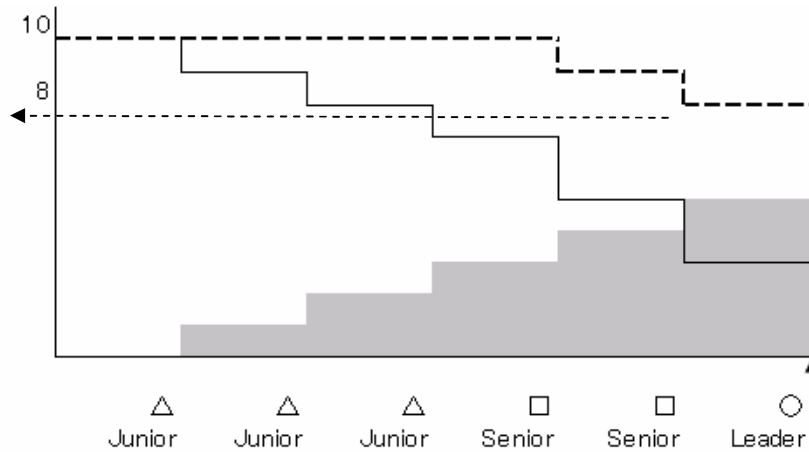
Source: The figure is adapted by the author from Imaoka [1998]. See also figure 8.

Figure 11: Case II Leader exhibits good leadership but seniors show less interest due to lack of incentives

○ Leader △ Junior △ Junior △ Junior □ Senior □ Senior
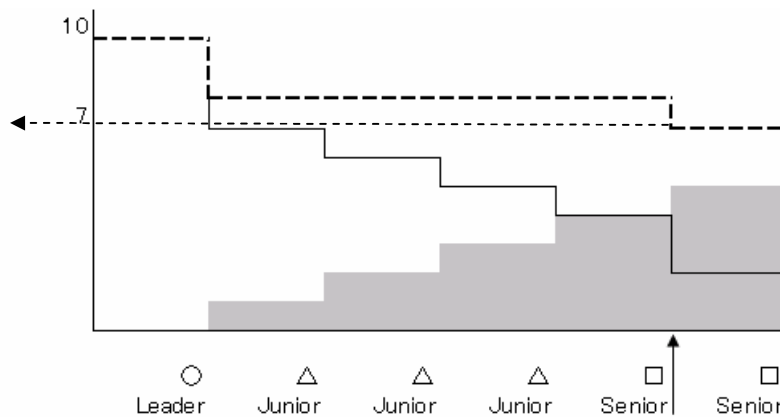
Source: This figure is adapted by the author from Imaoka [1998]. See also figure 8.

Figure 12: Training cost incurred by BMH from 2001 to 2003
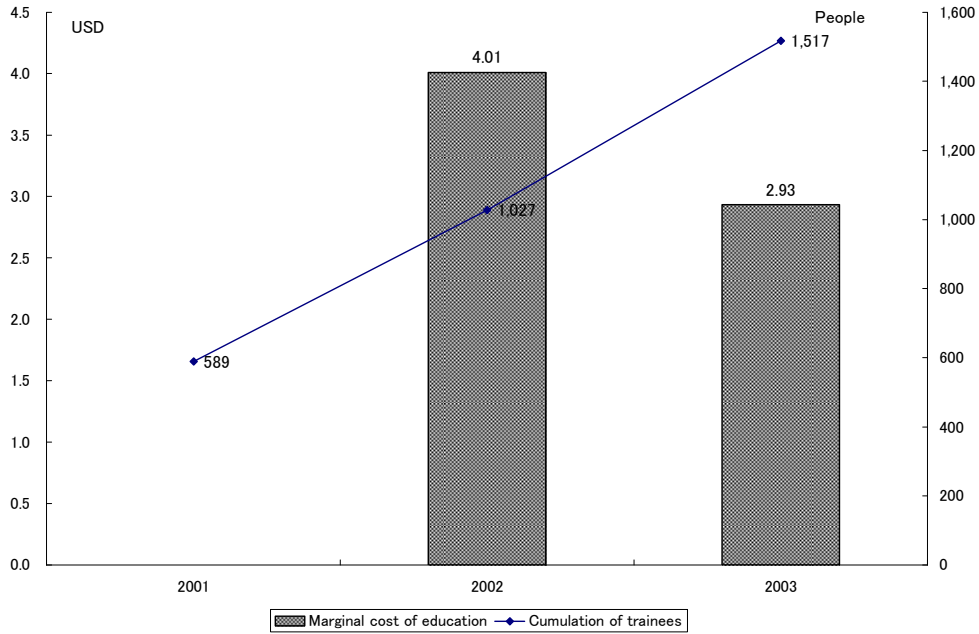
Source: This figure is adapted by the author from the Evaluation report of the BMH project by JICA [2004].

Figure 13: Result of questionnaire on the achievement of the BMH project: from 2001 to 2005
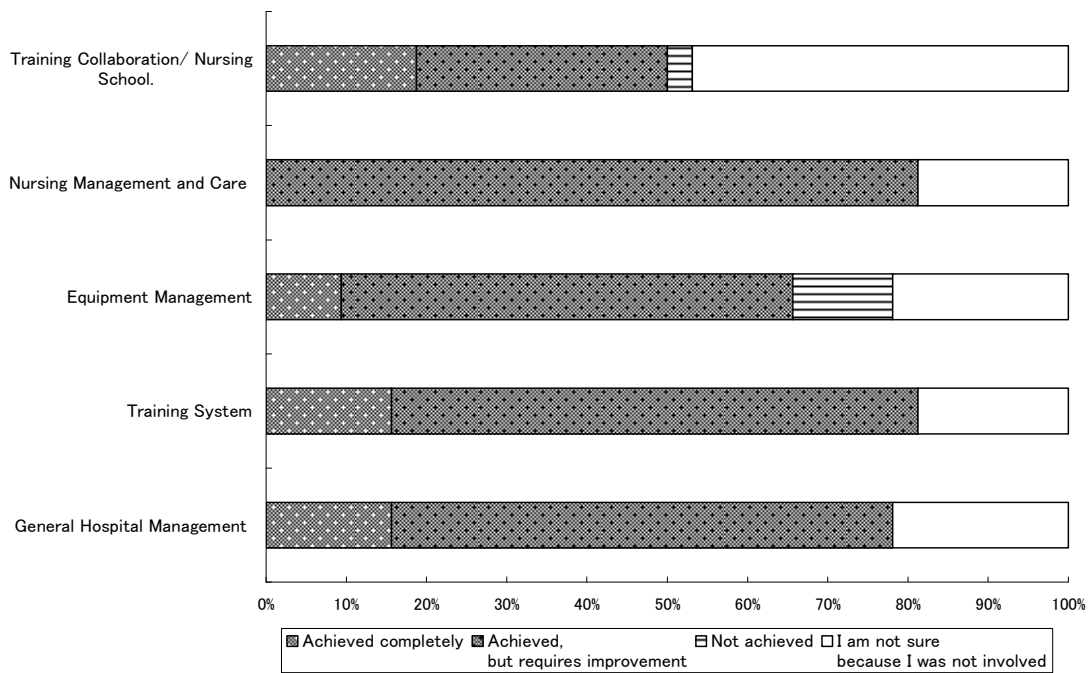
Source: This figure is adapted by the author from the Evaluation report of the BMH project by JICA [2004].

Table 1: History of projects undertaken in Bach Mai Hospital and Vietnam as a whole

ODA* type	Top Referral Hospitals	
GA	The Project for the Rehabilitation and Upgrading of Cho Ray Hospital	1992–1994
TCP	The Project on Cho Ray Hospital	1995–1999
GA	The Project for Improvement of Medical Equipment in Hai Ba Trung Hospital	1993–1994
GA	The Project for Improvement of Medical Equipment in Hanoi City	1993–1994
GA	The Project for Improvement of Bach Mai Hospital	1997–2000
TCP	The Bach Mai Hospital Project for Functional Enhancement	2000–2005

*GA denotes Grant Aid, and TCP denotes Technical Cooperation Project.

The Japanese ODA for BMH was provided at three stages: the first stage extended from 1997 to 2000; the second stage, 2000 to 2005; and the third stage, 2006 to 2009.

Source: Homepage of JICA: http://www.jica.go.jp/vietnam/others/data.html

Table 2:

Contingency table of trained managers and staff in Japan: 2001 to 2003

(Unit: person x month)

Year / Class	2001	2002	2003	
Managers	372	408	459	1,239
Staff	322	336	336	994
All	694	744	795	2,233
Staff/Managers	0.87	0.82	0.73	

Source: This table is calculated by the author based on data from the Evaluation report of the BMH project by JICA [2004].

Table 3:

Contingency table of trained managers and staff in Japan according to occupation: doctors, nurses, and equipments

(Unit: person x month)

Year	2001			2002			2003			
Occupation / Class	Doctors	Nurses	Equipment	Doctors	Nurses	Equipment	Doctors	Nurses	Equipment	
Managers	72	48	12	90	52	12	122	60	12	480
Staff	60	48	72	60	48	72	60	55	72	547
	132	96	84	150	100	84	182	115	84	1,027

Source: This table is calculated by the author based on data from the Evaluation report of the BMH project by JICA [2004].

Table 4:

Contingency table of trained manager and staff in Japan according to occupation : 2001–2003

(Unit: person x month)

Year / Occupation / Class	2001−2003			
	Doctors	Nurses	Equipment	
Managers	284	160	36	480
Staff	180	151	216	547
All	464	311	252	
Staff/Managers	0.634	0.94	6.00	
	464	311	252	1,027

Source: This table is calculated by author based on data from the Evaluation report of the BMH project by JICA [2004].

Between Nurturing and Nurtured Childhood Children Working on the Streets of Hanoi

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Abstract

This paper argues that globalisation has entailed a widening gap between the childhoods of the poor and the rich. The gap is between the nurtured childhood of the upcoming urban middle classes and the nurturing childhood of the poor. By opposition to the Western-inspired nurtured childhood, nurturing childhood finds its inspiration in reinvented Confucian tradition. Poor children are, from their early childhood, raised as productive members of the family and carry the burden of morality and filial duty on their small shoulders. Based on this particular pattern of upbringing, children feel responsible for the family even if it means that they have to sacrifice themselves. Exploring the traditional Confucian values and the impact of socio-economic changes in a context of an economic transition, the paper contends that while the lifestyle of children from the upper classes has come closer to that of their Western peers, that of poor children has increasingly been distanced from it. My argument is based on a case study carried out in Hanoi for a three-month period between August – November 2005.

1.   Introduction

This paper considers the everyday lives of children working on the streets in the capital of Vietnam, Hanoi. The primary aim of the study is to understand the widening gap generated by globalization between the childhoods of the poor and the rich. The gap is between nurtured childhood typified by children from the urban middle classes and nurturing childhood for many, which is reinforced by reinvented Confucian traditional. The distinction between 'nurtured' and 'nurturing' childhood I borrow from Hecht's study on street children in Recife, Brazil. (Hecht, 1998).

In the past two decades street children in Third World have captured a growing concern for many national and international development organizations, academics as well as the media. Policy interventions have ranged from the international rights convention, national legislations to local charitable aid programmes and interventions in order to help street kids get a 'proper childhood'. Although the United Nations Declaration of Human Rights adopted in 1948 ensures human the rights to defend and practice his/her own culture, the United Nations Convention on the Rights of the Child (CRC) claims uniformly entitled rights to a decent childhood for the children of the entire world regardless of their socio-economic situation or cultural background. The underlying assumption in this contradiction is that despite the existence of multiple cultures of childhood, only one particular form of childhood, the one that evolved in modern Europe and North America would be in compliance with children's rights.

This model is perceived as a social stage that is unchanging and universally experienced in a similar manner by children around the world and over time, and is patterned on the experiences of a rather small number of children in the world. This rather specific form of childhood that 'development' proposes for the children of the poor is as defined by UNICEF (2005):

> "Childhood is the time for children to be in school and at play, to grow strong and confident with the love and encouragement of their family and an extended community of caring adults. It is a precious time in which children should live free from fear, safe from violence and protected from abuse and exploitation. As such, childhood means much more than just the space between birth and the attainment of adulthood. It refers to the state and condition of a child's life, to the quality of those years."

As a consequence, other forms of childhoods are treated as anomalous or inferior, transforming 'development' into the endeavour to standardise childhood across the globe (cf. Boyden 1990; Burman 1996; Nieuwenhuys 1998; Stephens 1995). Western childhood fails to embrace the diversity of the social forces and cultural practices that shape childhood in the developing world. The result is extremely ambiguous and leads to hide the growing gap between the lives of the urban middle classes and those of the poor.

Denying that there often exists considerable difference in perception between children and adults, the approach is also top-down. When observing children's real lives, I believe with Punch, that children are the most appropriate informants to consult about their own social worlds (2000: 56). Throughout my fieldwork, and in particular during data analysis, I questioned myself as to "how different discursive practices produce different childhoods, each and all of which are 'real' within their own regime of truth" (James and Prout 1990: 27). This has been fundamental to consider the ideological distortions of Western childhood, by which other childhoods are condemned or ignored. Focusing on children's perceptions and everyday experiences, the central question of this study is formulated as follows: "how do children in Vietnam who work on the street balance the opposing ideals of childhood in society, in particular, how do they come to terms with the tension between 'nurtured' and 'nurturing' childhood?"

The paper is organized as follows. First, I discuss the gap between what 'development' has suggested as the ideal and real childhood practices as the one I observed in the context of Vietnam. I contend that the gap between ideal and real childhood is not a matter of a lack of development. Development, I argue, generates a growing gap between the childhood of the rich and the childhood of the poor not only globally between the North and the South but also locally, among social classes. More specifically, my Vietnamese case study suggests that there appears to be a growing gulf in childhood practices between the rich and the poor, in which Confucian values and the emergence of market economy are tightly enmeshed. I examine the diversity of childhood experiences in Hanoi. I compare the radically different everyday experiences of rich children with those of the poor. I then take a closer look at the real life situations of street working children in terms of poverty and work. Their families being highly dependent on their earnings, poverty is a major motivation driving children to work on the streets. Their contribution being vital for the family, I claim that it is crucial to understand how children perceive their roles and place themselves in the wider context of society (section 2). In section 3, I discuss tensions that children face in the course of their lives on the streets. To deal with the tensions, children keep going by highlighting the high moral value attached to their nurturing roles. Though causing pain and disappointment, they do not allow the sense of exclusion from nurtured childhood to take over their lives. Finally, I argue that the current discourse on childhood fails to account for dynamic socio-cultural constructions specific to a particular context in which they are enmeshed. More specifically, it fails to explain the childhood dichotomy, in which only rich children are able to emulate the

Western model while poor children seem to be condemned to accept to be nurturing and therefore distance themselves from this model.

2.   Ideal and practiced childhood

Here I begin arguing that there are basically two childhood models at work in Northern Vietnam at the same time: the one emulates the Western deal while the other evolves from the real life experiences of those who cannot or can only imperfectly emulate this model. I secondly contend that the two models closely follow class differences emerging from social transformation that shifted Vietnam from a collectivized socialist system towards an open-market capitalist structure.

The Western childhood ideal enshrined in the CRC, as said, articulates a typical image of nurtured childhood that has recently been enthusiastically exported as ideal for the children of the South. Ever since the rights of the child was declared, it has become vital for countries such as Vietnam to pursue this specific form of childhood to be accepted as a member of the 'international community'. As Nieuwenhuys claims (1998: 2), "the instrument is not culturally neutral but is grounded in the assumption both of the superiority of the childhood model as it has evolved in the North and the need to impose this model on a global scale". Ignoring significant differences in cultural backgrounds and social practices, other types of childhood practices are marginalised. Moreover, it denies children's agency to deal with tensions in enacting their childhood. As I shall argue next, this may be a very crucial aspect of the lives of poor children in North Vietnam.

Development for children of the poor in Vietnam in recent years has been something of a paradox. The values attached to children in Vietnamese society have for many centuries been inspired to Confucian philosophy. This philosophy, originally introduced by the Chinese, has played a dominant role in the family realm as well as in society. Familial morality was central to Confucianism and children were encouraged to show strong feelings of filial piety towards their parents. Filial piety is embedded in a broader concept of moral cultivation, through which the child learns to be obedient and respectful towards their parents, relatives, and elderly people at large and to understand and fulfil the responsibilities towards parents (Hojer *et al* 2004: 392). Gammeltoft and Olwig (2005) note that expectations of filial duty have a strong influence on ways of thinking and action in relation to children from different social backgrounds in Vietnam. Rydstrøm (2001; 2002; 2003), who carried out an extensive study on children's embodied morality in Northern Vietnam, highlights the local concern with morality/virtue/ethics. She argues (2003: 3), "morality (*dao duc*) is, among other things, a matter of practicing and 'behaving oneself' (*an o*) appropriately, avoiding 'confrontations' (*cham*), having 'sentiments' (*tinh cam*), and 'showing respect for the superior and self-denial for the inferior (*Biet kinh tren nhuong duoi*)". Vietnamese children, in particular, the poor are raised not merely as children as perceived in the West but with duties and obligations towards their family as well as towards their society, rather than to themselves (Rubenson 2005: 21). Growing up in such a society, the meaning of self is intimately tied to the solidarity of family. Children are valued as a part of the collective family unit rather than as autonomous individuals, who hold independent positions in society. Hence, collective rights weight heavier than individual interests. As a member of familial unit, Vietnamese children do not necessarily see their contribution to the household as 'work', but as 'fulfilling the share' and confirm the responsibility attached to the task (Hojer *et al* 2004: 393). This 'fulfilling the share' notion is strongly linked to the way in which children learn to practice morality and show love to their family.

Recent economic transformation in Vietnam under *Doi Moi* appears to have transformed the Confucian ideology as described above. A rapid shift from a colonial

administration, to a communist structure to state-controlled capitalism makes it difficult to classify the childhood models that are at work in contemporary North Vietnam. Roughly speaking, children seem to grow up in a situation in which divergent models of childhood are at work at the same time: on the one hand, children's lives are shaped by notions of filial duty that emphasize to be obedient, respectful and responsibilities to nurture families. On the other, children are informed by modernised, or westernised notions of vulnerability that emphasize the need for the protection, care, play and, above all, education. What is less clear is how children live the modernization process and experience socio-economic changes from their particular point of view. Particularly missing from the analysis is how real-life experiences are not only affected by but also impinge upon childhood ideals. Investigating how actual lives of those identified as 'street children' corresponds to the ways in which international society and local opinions associate with this social category, this study will unravel the real life situations of such children and will look at how they balance the two opposing ideas – nurturing and nurtured - in constructing their own childhood.

3. Real-life childhoods in Vietnam

During the fieldwork research, I remarked, unsurprisingly, considerable differences between a poor child and a rich child both in economic and social respect. In this section, I shall ponder on observed childhood practices based on the empirical data collected during fieldwork in Hanoi. I begin by describing characteristics contrasting a poor child with a rich child. I suggest that children are highly aware of their families' economic situation. Knowing that their contribution is indispensable for livelihood, children often work spontaneously, even if they do not like it, particularly when this work takes place on the street. For some, work is a duty they feel obliged to perform because of their circumstances, while for others, it is rather a voluntary act of love towards their family.

Differences between a poor child and a rich child exist, as I shall now proceed to illustrate, not only in terms of physical signs, but also in terms of their everyday practices with respect to work, education and play. In the course of my fieldwork, I had opportunities to visit several private English lessons open for upper-class Vietnamese children. In one school, lessons take place on weekends from 8am to 10am. During the break time, children play football or games with other kids in the courtyard. They also go to a nearby shop to buy snacks or drinks with pocket money given by their mothers. Comparing these children to poor children working on the streets, the first noticeable difference is their physical appearance. Although younger than most of poor children I knew, wealthier kids were generally taller and bigger than their poorer peers. This is probably due to the differences in nutrition. Rich children eat more calorie-rich and nourishing food like meat and fish, whereas poor children tend to eat simpler and cheaper food such as rice and vegetables, only rarely taking meat.

The clothing they wear is also very different. Rich children dress up with new and clean clothes just like European middle-class children, while poorer children wear plain Vietnamese clothing. For instance, a child street vendor will typically wear dark colored polyester trousers, a T-shirt and a long sleeved shirt on the top to avoid sunburn. Shoe shining boys almost always wear a cap with a brim and girls sometimes wear a hat. Poor children tend to wear the cheapest plastic sandals, whereas rich children wear more solid sandals with which they can play football. All rich children I talked to go to school and bring no resources home. They are first and foremost students rather than workers. During the school term and to a large extent also during holidays, rich children spend most of their time studying. It is very common in Vietnam to go to extra schools to learn Foreign languages, English being the most popular. One Vietnamese English teacher working for a private school said how eager the parents were to invest in their children's education. She also mentioned that the children's

attitudes change radically when parents occasionally visit the classroom. Knowing that they are expected to study and perform well, children suddenly become enthusiastic participants in class for their parents to be proud of them.

The wealthy parents I met in Hanoi tended to have no more than two children. Even if they had many siblings themselves, having children nowadays, they claimed, would entail considerable expense. One upper middle-class mother was saving money for her daughter (11) that she wanted to go to a well-known English school in which the fee for three months exceeded her monthly earnings. The mother devoted much time to bring her daughter to school everyday and to different private lessons to learn English and piano. She found it satisfying that she could realize her daughter's wishes.

Once I asked a group of eight wealthier children aged 11 to 13 to draw a timetable of an ordinary day. Besides studying at school, they appeared to spend between 2-5 hours at home for doing homework or learning English. Girls usually spend about 30 minutes to 1 hour to help their mother preparing dinner and cleaning table after meals, whereas boys hardly do any household tasks. Most rich children spend their free time playing with friends or watching TV. Among boys, playing computer games was also very popular. Poor children spend their time in totally different ways. For the poor, the main activity of a day is doing productive work for the maintenance of the family. I also asked both groups of children the questions: "what is the most important thing in your life?" and "what do you want to be in the future?". As for the former question, poor children commonly agreed that family was the most important thing in their lives. One shoe shining boy told me that it is a customary belief in Vietnam that family comes first. Rich children's answers varied from becoming rich, having friends, playing with computer games and studying. For only one girl family came first. Confident that their dreams would come true, rich children's dreams of the future were, when compared to those of poor kids, very ambitious. They wanted to become the most famous architect, an actor, a very rich person, a secretary general of the UN, president of the United States, etc.

Rich children in Hanoi have, in broad terms, much in common with the ideal of nurtured childhood prevailing in Western societies. Rich children are not productive members of the family, but consumers. Parents take care of their children in the belief that they are innocent in need of protection from the world of adults. Rich children have much time to amuse themselves both at school and at home. The only task given to them is to achieve academically so as to realize their bright expectations and to satisfy their parents. In contrast to nurtured rich children, poor children working on the streets, as I now turn to contend, experience a radically different type of childhood.

Though it may not be their sole concern, poverty plays a major role in prompting children to work on the streets of Hanoi. Of the children involved in this study, 6 out of 7 said family's financial difficulty was their foremost reason to work. Born as daughters and sons of poor parents, these children have experienced poverty from an early age. As they grow older, they become increasingly aware of families' economic situations, in which lack of income or the absence of a steady income source remains the main problem. While children in rural areas leave school before completing the compulsory education and migrate to Hanoi to work to help their family, urban children may get support from charity organizations or private donors and be able to combine both work and schooling. Nonetheless, both in rural and urban areas, children are very much aware that without the money they bring in, their families could not live.

Take for example thirteen-year-old Nguyet[1], who is the youngest in her family. Nguyet's mother, in search of a better life, migrated to Hanoi with two children she got from a

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[1] As far as anonymity is concerned, children's names are all changed in this study.

previous marriage. Nguyet was born after her mother settled down in a small rented room in almost slum-like area of Hanoi with a new husband. Nguyet started working when she was 9. She sells postcards and books for foreign tourists around Hoan Kiem Lake. During the week she goes to a charity school in the morning and starts working after lunch until after 11pm. An international NGO provides with her school uniforms, textbooks, notebooks and pencils for free. On weekends, as there is no schooling, she spends all day long on the street. One Saturday, when we sat together on the edge of Hoan Kiem Lake, she told me why she started working on the streets:

"I started because my family is poor. Before I used to sell chewing gum and sweets, but now I know a bit of English so that I sell postcards and books to foreigners. I earn about 10,000VND to 20,000VND[2] a day. Because foreign tourists prefer to buy from small children, I earn almost twice as much as my sister or brother. If I don't work, my family does not have enough money to buy food and pay for the room."

Like Nguyet, Loan is a Hanoi born girl. She has been vending chewing gum on the streets for six years since she was 4. She hawks the streets near Hoan Kiem Lake with its many cafes, bars and restaurants. She lost her father a year ago and she lives with her mother and two older siblings in the South of Hoan Kiem district. Her sister (24) was recently arrested by the police while selling books on the street and, has been sent to a re-education centre for a period of three months. Her brother (22) also sells books. But he is addicted and spends all his money on drugs. Being left with a mother who is also a street vendor, Loan has to work even harder to fill the gap left by her absent sister and addicted brother.

Unlike Nguyet and Loan, 15-year-old Huyen comes from a rural peasant family in Ha Nam province 70km from Hanoi. She sells fried donuts on the main streets of Thanh Xuan district close to the periphery of the city. With a desolate look in her eyes, Huyen told me:

"I decided to come to work in Hanoi because my family is poor. When I was 12 (after 7th grade), my father asked me to drop out school. My parents did not have enough money to pay the school fee for the three of us. So I left school for my younger sister and a brother. Since then, I worked at home all day long, cooking, cleaning, raising animals and working on the field. But after one year, I have become aware that we could not continue living in that way. My parents are farmers but farming doesn't yield enough for selling. We didn't have enough money to buy food. I really didn't want to leave home, but one day I told my parents that I would go to Hanoi to work. I knew a woman from the same village who was already starting a small business in Hanoi. She makes fried donuts. I talked to this woman, and she told me that I could sell them on the streets".

Although she wanted to continue schooling, Huyen accepted her father's instigation without muttering. She knew not only that her family did not have enough money for their subsistence but also that they have a substantial debt. Three years ago Huyen's parents rebuilt their almost collapsing house to secure one of the only assets they still kept. Having no financial means of their own, they borrowed 15,000,000 VND (equivalent to US 950$) from kin and friends. Though three years have already past, they have neither been able to pay off the debt nor any future prospect to ever return such a large amount of money. As the oldest daughter of the family, Huyen felt that it was her duty to leave home to work. Her family since then depends on Huyan's earnings of about 300,000VND (less than US 20$) a month, which is their only source of income to survive and pay for school. Similarly, 16-year-old boy, Dong is also the oldest child in his family. He migrated to Hanoi from Thanh Hoa province to help his peasant parents and a younger brother. In Dong's words:

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[2] At the time of my stay in Hanoi, 1 US $ was equivalent to about 15,900 Vietnamese Dong (VND)

"I left school after the 8th grade because I knew that my parents were not able to afford the school fees. I wanted to continue but I understood that leaving school was the only solution for my family. I did not tell anything to my parents though, so when my teacher came to my house trying to encourage me to come back to school, they were very angry. They even forced me to go back to school. I told them that I would go to Hanoi to work but they didn't agree. I tried to convince them many times. They only let me go when I said that I wanted to work in the city to learn something new".

Though being aware that children's contributions would materially improve their living situation, like Dong's, a lot of parents found it difficult to allow their children to take up paid work to help them financially. They felt that the urban street is a hazardous place for a small child to be. Moreover, though children work at home to help with household chores, they could morally ill accept that their children would leave home to bring money back for the family. Some mothers expressed a feeling of regret but admitted that their economic situation did not allow her to provide her kids with a life as that of upper class children. Ashamed for 'failing' to be a good parent, these feelings are well expressed by Xuan's mother, herself a street vendor:

"My children know that without money we could not live. I feel sorry for my kids that they have to work on the streets. Children from rich families can just go to school and spend their free time watching TV or playing games, but my kids have work to help me pay the rent and buy food. I have considered sending my kids to rich families to be adopted so that they need not to suffer from poverty. I do not want them to work on the streets and feel miserable. I tell them to stay at home to study for school."

In contrast to Xuan's mother, a few parents did not perceive working on the street as something negative, but rather as part of a poor child's natural way of growing up. In the case of 14 year-old shoe shining boy Minh, it was his father who encouraged him to work. Minh had been working since he was 4. He had managed to combine work[3] with school. Understanding his family's financial difficulties, Minh dropped out of school after the 7th grade on his own in order to lighten his father's burden. As his father believed that shoe shining would bring more money home, Minh had no other option than obey him. He travels at half an hour bus drive distance of his village in Ha Tay province every morning to work on the streets of Hanoi. Minh's father, besides farming, works as a porter, carrying goods on his back or shoulders, yet his income is too unstable to depend on. Although his older sister sends some money that she earns in a plastic factory, it is not sufficient to meet the family's needs as a grandmother, a stepmother and a younger sister depend on them and do not bring in any money.

Unlike the other children, 15-year-old Thanh, has migrated from Ha Nam province to Hanoi in search of adventure. He dropped out of school after 6th grade because he found what he learned there useless. Most of his friends also left school. Bored of the monotonous rural life, they came together to Hanoi. His mother disagreed vehemently, yet Thanh eventually convinced her. Thanh's father has left home with another woman more than 10 years earlier. But his family's livelihood was relatively stable as two of his older siblings send money home hat they earn in a noodle factory. Although not strictly necessary, Thanh still sends most of his earnings home. When I asked why he does not spend money on himself, Thanh replied: "Because I just like it. I want to contribute to my family."

Like Thanh, all children involved in my research bring most of their earnings home. As children know that their families highly depend on their incomes, expenditures on themselves

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[3] Minh used to make *Nons*, Vietnamese traditional leaf-covered hats in his village.

were generally kept to a minimum and devoted necessary items as food and accommodation. Though from time to time they would buy themselves snacks, a few pieces of clothing or accessories, they were extremely careful not to cross the boundary that would threaten their family's survival.

As said above, financial constraints played a crucial role in children's decision to start working. Decisions made to work on the streets were, significantly, almost always the child's own. While many parents disagreed with their decisions, a number of them perceived it as a life-course of children born in a poor family. In what follows I probe into children's rationale to work and how they relate to their specific working place, the streets.

When one asks a child working on the street why s/he has to work, the most likely answer is that it is because his/her family is poor. No doubt this is true, as the majority of children to whom I asked this question gave this answer. However, as I spent more time and had many conversations with children, I gradually became aware that poverty is not the only explanation. Dong (16) works in a lively area of Donh Da district called Kim Lien. The main streets are full of cafés, bars and restaurants, which attract locals in numbers. Dong usually wanders around the main street looking for customers in cafés or a local restaurant where he has gained a kind of right to customers above other shoe shining boys. He came to Hanoi to work not only to support his family:

Aiko: How do you find working in Hanoi?
Dong: I feel happy.
Aiko: Why?
Dong: Because when I'm in Hanoi, I have a lot of chance to meet people.
Aiko: Would you not prefer going back to your village?
Dong: I prefer staying in Hanoi. Of course I miss my family and I always want to go back to my village but there is nothing to do there.
Aiko: Will you remain in Hanoi also when you get older?
Dong: So far, I think so. Because I think Hanoi is a good place to earn money, learn how to do business and meet people.

Unlike other children, for Dong Hanoi was a place where to find opportunities unavailable in his village. Wishing to improve his future, he believed that staying in his village would thwart his and his family's prospects. Though his current life in Hanoi is, he felt, quite uncomfortable, he saw it as a first step towards his dream to open a restaurant and start his own business in the future. What encouraged Huyen (15) to work was slightly different:

Aiko: How do you find working in Hanoi?
Huyen: At the beginning I really didn't want to work. But I just had to do it because my family is poor. Now, I got used to it so it's ok. But if I have a chance, I would prefer to change job.
Aiko: Why did you think you had to do it? Did you feel responsible?
Huyen: Yes, especially to my mother. My mother always worked very hard in the house and on the field. She was working all the time.
Aiko: How about your father?
Huyen: I don't feel responsible for my father. He spends a lot of the money I earn on alcohol and I am really unhappy about it.

At the core, Huyen had strong feelings of love for her mother, who for her is the most important person in her life. Having worked together with from early childhood Huyen firmly believed that she should help and support her mother. Huyen's love for her mother inspired deep abhorrence to her father. He had been very strict, particularly towards her, she felt, not allowing her to play with her friends and sometimes going as far as beating her. For Huyen,

leaving home to work on the streets was a way to share her mother's economic hardships. Similarly, Minh (14) emphasized his compassionate feelings towards his hardworking father, who also happened to be his only blood relative:

> "It's for my father that I work. My stepmother doesn't work outside the home because she is mentally unstable. My grandmother is too old to work. My father works very hard for the family and I want to support him".

As a child born in a poor family, Vietnamese children are raised as productive members of the family from an early age. However, the degree to which they feel responsible and the burden they eventually decide to take on their shoulders varies. While some children felt that supporting their family was a duty to which circumstances obliged them to submit, others saw it more as a voluntary act of love. Dong (16) stressed that it was his duty as the eldest son to help his parents and pay for his brother's school fees:

> Aiko: Do your parents ask you for money?
> Dong: No, never. But I feel it's my responsibility to bring money home.
> Aiko: Why do you feel that?
> Dong: I am the oldest child in my family and I am already grown up! I am responsible for my parents and my younger brother. My parents are just farmers. My father from time to time works at construction sites but he hardly gets any work offered recently. So, I have to devote myself to work.

During the many conversations we had together, Dong once mentioned that he shouldered a heavy burden to support his family. When I asked him what he would like to change in his life, he immediately replied "I want my family to have better living conditions so that I don't need to worry about their economic situation anymore". Other children who have older siblings like Nguyet tended to feel less responsible. Nguyet seldom felt that she had to work. She was aware of the importance of her earnings for the family's livelihood, but underlined that it was rather on account of her spontaneous wish to help. Although Nguyet usually makes more money than her sister (22) or brother (15), when she cannot sell enough postcards, her older siblings give her money to buy lunch. Nevertheless, despite these varied feelings towards work, as said, all children involved in this study gave, voluntarily, most money they earn on the streets to parents.

I met no child in Hanoi claiming to like working on the streets. Although admitting that it gives freedom, all found working on the street was very hard in many respects. Firstly, because no matter how severe the weather is, they have to work everyday be it under the hot sun in summer or on cold days in winter days. Secondly, they are constantly harassed by the police. All children were afraid of the police. Some had experiences of getting their goods or tools confiscated and a few had been arrested and sent to a reformatory for a few months.

When I asked whether they preferred to stay at home instead of working on the streets, I got different reactions. Loan (10) and Huyen preferred to stay at home and do the household chores. All the others preferred working on the streets. As Dong said "there is nothing to do at home", material scarcity of home was a commonly shared view. Further, the lower values attached to non-productive household work made home less attractive than the streets. For Nguyet, it was not only that she did not like doing the cooking and the cleaning, but also because of the higher values attached to the street as a place to generate income. Working on the streets, she wished other people (she meant her migrant neighbors in the same commune) to understand the difficulties of her family. For Xuan, it was also to escape from her older sister who, due to the mental disease she faces, oftentimes beats her. And for Minh, it was because he felt more comfortable being with his friends on the street.

In sum, this section has dwelt on distinctions between rich and poor children in terms of the type of childhood that they experience. Nurtured children in Vietnam experience a

childhood similar to that of children in wealthy countries, their main 'work' being first and foremost to be a good learner. Protected by parents, rich nurtured children are allowed to entertain themselves and dream of a bright future. Poor children, on the other hand, far from being nurtured, nurture the household. Whereas nurtured children are consumers who heavily depend on their parents, poor children are productive workers who bring monetary resources home, without which their family could not survive. No doubt that poor children play a crucial role in the survival of the family and that consciously or unconsciously, they shoulder a substantial burden. What makes them keep going? Are poor children just simply nurturing by nature or do they have to force themselves to be so? If so, why and how do they struggle? Do they try to find a way out? In the following section, I shall consider these questions by looking at the tensions that inform nurturing children's lives who works on the streets.

4.   Tensions in nurturing children's lives

Children working on the streets experience, as opposed to rich Vietnamese children, a nurturing childhood rather than a nurtured childhood. As argued, to be nurturing entails a certain degree of self-sacrifice, such as working on the streets in spite of being unwanted, dropping out school to work and devoting oneself to maintain the family. The children I researched accepted their roles as sons and daughters from poor families. Here I argue that although nurturing the family may not be what the children would wish to pursue if they had the choice, they carry the burden that familial solidarity puts on their shoulders. I begin to substantiate this statement by first describing a range of tensions that children face. I then turn to how they attempt to deal with these tensions in daily life.

I have contended that most children involved in my research work out of their desire to help their families. Rather than being an economic burden on their parents, children work on the streets to contribute for their families' income. Even if it means to sacrifice their own wishes or dreams, children abide by feelings of filial duty to nurture the households. It is this filial duty that is at the core of children's moral behavior. However, as one can imagine, it is not always easy to carry on working. During many conversations children told me about the obstacles, difficulties and anxieties they have to face in their daily life. These come first from government policies, second from parental expectations and third from the perceived gulf that separates them from the children who do not need to work.

First, children were highly concerned with the presence of the police on the streets while working. Many said they wish to change jobs due to the intense police patrolling that hindered them in carrying out their 'illegal' work on the streets. In the political capital Hanoi, in particular in tourist areas, one sees a considerable police force. In the eyes of local authorities, street working children are viewed as a disturbance that threatens the safety of foreign tourists as well as of the local public. Before *Doi Moi,* there seems to have been fewer children as well as adults working on the streets. And unlike recent years, 'the street children problem' was not such a serious social problem as it is today (Phung To Hanh 1996: 1). Urban administrators mostly ignored it or kept away from the so-called 'seamy side of society' (ibid, 1996: 1). It was after the reform towards a liberalized market economy that the presence of street working children became more apparent in the eyes of government as well as society. Simply rounding up children by police forces and putting them in an institution, it was believed that a 'social phenomenon' of street children would somehow be settled through institutionalization. Yet there were signs of growing numbers of children working on the urban streets.

It was with the arrival of foreign NGOs and ratification of the CRC that from the early 90's the Vietnamese government attitude towards children on the streets gradually changed. International organizations coupled their increasing global concern with children's rights with

large sums of financial aid for the children in the streets. The media attention given to children has increased since then. As Bond puts it (2003: 14), in the mid 90s, "it suddenly became important [for the local authorities] to protect street children from the 'social evils' that surrounded them in their day to day life, the surest way being for them to return home permanently". This assumption is based on the CRC provision that children's healthy development should take place at 'home'. As opposed to 'home', streets are primarily viewed as a risky space, in which social evils (*te nan xa hoi*) such as crime, drug abuse and prostitution thrives and exposes children to the loss of a proper childhood (Nieuwenhuys 2003: 109). Defined as 'Children in Need of Special Protection (CNSP)' by local authorities, street children are beneficiaries of numerous NGO projects[4]. However, listening to children has made me aware that the current approach reflects a lack of interest for the diversity of their experiences. Neglecting the diverse contexts in which they in which they live, local authorities see in them little else than a social problem in need of cure (Hecht 1998: 97). The treatment given to cure the problem is primarily geared towards prevention, protection and reintegration by building a firm bridge between children and home. In Hanoi, implementation of this policy is typically done by the police. Police patrols constantly inspect the main tourist area (Hoan Kiem district) and is at a higher state of alert during the period when major events[5] take place in the city.

Doi Moi's attempt at generating money through global markets, such as tourism, international events and other business activities has been important for Vietnam's economic development in recent years. In order to maintain the level of economic growth Vietnam has pursued a policy of integration in the international capitalist economy under the control of a socialist state. These policies have been accompanied by *de facto* privatization of welfare, education and health services. Rescuing 'Children in Need of Special Protection' whose childhood is at risk is not the primary concern of government but to hide street children away by sending them back to their homes. This policy has been reinforced after 2003, when there was a big sports event, SEA GAME23 involving ASEAN member countries in Hanoi. A lot of effort as well as money were invested to improve the infrastructure, provide better roads and control traffic. Believing that they would generate negative images of Hanoi to visitors, the government also started clearing up the street from working children. Under cover of protecting them from the exploitative streets, children were arrested by the police and sent first to a social protection centre for a period from two weeks to three months, then back to their home villages. Evacuating street children in this way was praised as a 'success' and the policy is pursued till this day.

A tourist who would visit Hanoi for a short period of time may think that there are no street children, and this is also what I felt in the beginning of my fieldwork. When I asked in the first week of my fieldwork research why there were so few street children, a middle aged woman replied: "Only recently shoe-shiners disappeared from the streets. Who can I ask to

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[4] Officially, all the street children projects in Vietnam require permission from the government to be implemented. Most international organizations are thus obliged to implement projects together with the local committee, namely, Commission for Population, Family and Children (CPFC). In the name of local ownership, the government strictly regulates what should be and should not be done for children on the streets.

[5] During my fieldwork, there were three major events in Hanoi: Ho Chi Minh's Declaration of Vietnam's Independence on 19th August, National independence day on 2nd September, and Hanoi's liberation day on 10th October. Local authorities begin preparing for each event one month to a few weeks prior the actual date of the event, which required a considerable number of police on the streets. Further, the year 2005 was the 60th anniversary since the end of the war in 1945, therefore patrol of the police to clear up the streets was intensified. Almost every corner of the main districts, the presence of police, army as well as local committee members was observed. In addition, during the whole month of October, there was a traffic/road safety campaign, which required the presence of police on major streets.

shine my shoes now? I don't know where they all went." As this woman, many locals told that there are scarcely any children working on the streets any longer. But I soon realized that it was not true. It is not that children are no longer on the streets to work, but rather, they have become highly skilled in making themselves invisible. Nguyet (13) for instance, always keeps post cards and books in a coloured plastic bag to pretend she is but a girl wandering around the lake instead of a street vendor. Like other children, Nguyet appeared very much scared of the police:

Aiko: What are you most afraid of while working on the streets?
Nguyet: I am afraid of the police. They are very strict. I cannot work when there is police. When they come, you have to be very agile and quick to go into hiding.
Aiko: Have you been arrested?
Nguyet: No, not yet.
Aiko: Do you know what happens if you are arrested?
Nguyet: Yes, because my mother, sister and brother have been arrested before. They send you to a centre in Ba Vi. Ah, I actually got almost arrested about three or four months ago just near the bus stop. But at that time, they released me immediately after.
Aiko: Did you have to pay?
Nguyet: No, but they took all my postcards and books away.

Some children have experiences of being arrested by the police and sent to a re-education centre for a few months to live and work with other children. Loan (10) talked about it:

"I had to stay in Ba Vi for three months to do some kind of house work like cleaning and washing. People were not very nice there in the centre. They shouldn't have arrested me because I have to work to earn money! But after three months, I was free. My mother told me the number of bus to take so that I could come back to Hanoi alone".

Many children consider changing their work so big is the anxiety of being arrested, a decision precipitated, as we shall see, by the contempt in which their street-based activities may be held. Dong (16), who happened to quit shoe shining after a few interviews, told me:

"There were a few times when I was in Kim Lien that the police on the campaign to clear up the city came to the streets. I was so scared of being arrested. They took a couple of young boys. But now, as I work for the restaurant (as a motorbike keeper) I don't need to worry about these things anymore".

As he was the only one who switched his work during my fieldwork period, I further asked Dong the main reason why he no longer wanted to continue shoe shining. He replied, to my surprise, that it was neither because of police harassment nor because of the money he would make in the restaurant:

Dong I didn't like shoe shining anymore because many people don't respect this job.
Aiko Why did you choose to do shoe shining when you started?
Dong My friend from the same village was doing this job so I started also. Nobody forced me to do it. It was just like a hobby for me when I started. It gave me great freedom (as he was self-employed).
Aiko How many jobs have you done for the last two years since you migrated to Hanoi?

Dong   Many different jobs. So many that I don't even remember exactly… I worked in many different local open door restaurants, in a local bar (*bia hoi*) as a waiter, sold paintings on the streets, and did a few other things ….

Aiko   Why did you change your work so many times?

Dong   I didn't like any of the work I tried. None of them was suitable for me.

Throughout my research, Dong repeatedly showed low self-esteem and anxiety about his future. Dropping out before completing the secondary school, his concern for the family generated a feeling of inferiority. As mentioned earlier, in Vietnamese society, in particular, among the poor, morality plays a crucial role not only in showing respect for the superior but also to reinforce and legitimise self-denial in the inferior. In Dong's case, it is his being looked upon with contempt by the urban public that made him feel ashamed of his work. As if seeking a place to justify his existence in society, Dong keeps changing his work.

Far from protecting poor children, the government's policies have in practice the opposite effect. Official guidelines not only fail to help children return home but threaten their work opportunity and increase their vulnerability. This effect is strongly linked to *Doi Moi* open door policies and the transformation of the social security system it entailed.

Secondly, as remarked in the previous section, children are well aware of their position as poor in society. As daughters and sons of poor families, they accept their roles as income generators understanding it is essential for their livelihood. This does not mean, however, that they are satisfied with it. Even if children bring most of their earnings home, a number of them admit that they wish to keep more money for themselves. Generally, parents allow their children to keep a small sum of money to buy snacks, drinks, food and sometimes accessories or clothing. Although parents do not set a strict amount that children should earn, they know exactly how much money their parents expect them to bring home. When children cannot bring enough money home, parents react in different ways. Some conceal their disappointment while others, such as Loan's mother or Minh's father, express their dissatisfaction and resentment. Of course such parental attitudes reinforce children's feelings of failure to fulfill their parents' expectations. Minh struggles to live up to what his father expects from his only son. Noting that he felt more comfortable with shoe shining friends on the streets than with his parents:

"I feel that I'm less loved by my parents than other children. I feel sad… because my father shouts at me. Whenever I bring a little amount of money, he shouts at me and says that I should work harder and earn more. But I wish I could go back to *Non* making. That job was not difficult and I liked it much more than shoe shining… But I cannot say it to my father because I know that with *Non* making, I cannot earn enough for my family".

Despite the fact that he actually desires to keep more money for himself, Minh cannot disappoint his father's expectation that his son should behave as the good child of poor parents and support the family. But even if he does share his family's hardships, Minh is not happy at home.

As a sole income earner of the family, the economic burden bears considerably on Dong's and Huyen's shoulders. They both voice serious concern about the financial difficulties of their families, whose survival is largely in their hands. Dong hoped that his family would improve its financial situation so that he could be released from the anxiety arising from poverty at home. Yet Dong emphasizes his responsibility to work to support his family. Huyen repeatedly claimed that her work, fried donut selling, no longer brings enough money. Once I asked her what she would wish if her wishes were to be realized. As if working to support family was an ever-lasting duty, she answered,: "I just want a more stable job". In one of the last conversations I had together with Huyen, she told me that she does not

think of anything else than the amount of money her mother would need to ensure the livelihood of the family. Both Dong's and Huyen's case reveals dramatically how the feeling of responsibility for the family leaves no room for more childish desires to keep some money to spend on themselves.

I have suggested earlier that the local interpretations of what an ideal childhood is about may differ according to social class. In explaining the meaning of '*Dao duc* (moral)' and '*Tinh cam* (sentiment)', which for Rydstrøm are crucial aspects of children's moral upbringing, Nguyet's reflects:

Nguyet *Dao duc* means to help others. For example, if you are rich, you shouldn't look down upon the poor. You have to respect others. *Tinh cam* means that for instance when I am sad or happy, I tell others about it. Then I can share both sad and good things with other people. Because in this way they can show me sympathy. I want to get more *tinh cam*, it makes me happy.

Aiko What do you think you have to do to get more *tinh cam*?

Nguyet I have to be good. I have to learn well and work hard. I mean both studying (at school) and working (on the streets to contribute for the family). I am trying my best to get more *tinh cam.*

I have many times witnessed Nguyet rubbing the sleep out of her red eyes while trying to sell more postcards. She would not stop selling as long as there were tourists in the streets. As I gradually got to know Nguyet, I also came to understand how difficult she finds it to be a 'good child'. She has managed to work hard both at school and on the streets since she was 9. She is the best student in math, and does not go to bed before finishing her homework. Now, she is in the last year of her primary school and craves to continue her studies. But as the secondary school supported by the NGO is too far to reach for a small girl like her, she also knows that it would not be possible to continue schooling without a bicycle, something her mother cannot afford. She knew that a good learner could eventually attain through schooling for herself and her family much more than by following already paved ways that accorded with lives of the urban street workers. On the other hand, she also knew that her monetary contribution to the household had become indispensable to sustain the family. She continues to work on the streets as a daughter of the urban poor, with a tiny hope to realize her only wish.

For most children, poverty is a primal cause of hardships in their lives. A number of them claim that if only their families had more financial resources, they would have been happier than now. For instance, Loan described feeling about working on the streets: "I feel miserable working on the street. Why do rich people have so many different motorbikes while I don't even have a bicycle?" Working on the crowded lively streets, in which rich tourists gather to visit shops and cafés leaves her with disconsolate feeling. The children who experience poverty at home rarely dream to be rich when they grow up. Whether they believe such a dream is merely fantasy or hold antagonistic feelings towards rich people, children wish to have little more than just enough to keep going. When I asked Xuan about her dreams for the future, she replied:

"I don't want to be rich, because I come from a poor family. I just want to have enough money so that my family can be happy. In future, I would love to be a doctor. A doctor for poor people. There are many poor people who cannot afford to go to hospital. If I become a doctor, then I can cure those people".

Poverty causes tensions between being an ideal child as parents expect them to be and their desire to be released from economic burden. As their moral duties enjoin them to share the hardships of the family, children live in constant tension. As I now turn to discuss, poor

children are also under another tension, the one that arises from the gulf separating their world with that of rich children.

Children often compare themselves with other children who go to school and need not to work for money. Children tend to separate, consciously or unconsciously, the world of the rich from that of the poor. As if they come from another social world, they draw a distinction between the haves and the have-nots. From the latter perspective the childhood of the former is happier because they can be full time students and have no other responsibility. Experiences at home, at school and on the streets create a range of tensions - stress, frictions and even hostility - against children of the haves.

The children may harbour hostile feelings towards non-working children who spend their time mostly in school. As a child who combines work with school, Xuan said:

Xuan I like going to school because my teacher is very nice. She is a new teacher in my school and she has been very kind to me. And she always tells me that the school is a happy place for children!

Aiko How about your friends at school?

Xuan My classmates tease on me because I sell chewing gum on the street. They call me 'a chewing gum seller' and make fun of me. I hate them. But I want to be like them so that I can tease them back.

Though Loan went to a different school[6], she too experienced bullying at school. Although her mother was planning to send Loan to a new school, Loan did not seem to be enthusiastic due to her dismal memories with school peers. Nonetheless, according to Nguyet who had similar experiences but overcame them, bulling rarely occurs as children grow older: "we, poor students in the final grade, have to be good examples for younger students so we behave well at school. But in Loan's class, there were only a few working children because they are small. That's why she was bullied". When I asked Nguyet what she thought about her friends who do not work, she replied:

"I think they have more time to play. Sometimes when I'm bored of working, I wish I could play freely like them. But I don't envy them because my family is in difficulties and I have to accept that I need to help my family".

Persuading herself to accept the situation in which she was born, it is however not as straightforward as she hopes for. Nguyet continues, looking back how she has lived through practices of her childhood:

Nguyet When I was smaller like Xuan or Loan's age, I think I was happy enough. I had to work everyday selling chewing gum and sweets but I felt happy. But now because of the hardships that my family face, I don't feel as happy as before. I think non-working children are happier.

Aiko What do you think you would need to be happy?

Nguyet I need more money and also need to learn better at school. I want to be happy like others. So I would continue this work (selling postcards and books) for a few more years, then when I'll get my identity card[7] I want to find a more stable job. Maybe in a souvenir shop…

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[6] At the time of my fieldwork, Loan was in the process of transferring to another school from the same charity school as Nguyet's, in which for small Loan was too far to walk therefore could not achieve enough attendance. Unlike rich children, none of her family had spare time to bring her to school nor means to send her to school, for instance, a bicycle. Although according to her physical age, she ought to be in the 3rd grade yet she has to start from the 1st grade in a new school, which may cause another reason to be bullied by other students.

[7] In Vietnam, when a child reaches the age of 18, s/he receives an identity card from the authority. It is generally said by children that if they have an ID card, it allows them to engage with a more stable job.

All the children saw themselves as less happy than non-working children who are looked after better by their parents and have more time for play and study. Even within the same family there can be differences. Huyen: "I think my sister and my brother are much happier than me because they just go to school and need not to work hard like me". When I continued to ask Huyan about her relationships with her siblings, she showed feelings of love for her brother, but not to her sister. Later when I visited her family 70 km South of Hanoi, I found out that thanks to a support of French foster parents living in Paris at age 13, the same age at which Huyen started working on the streets, her sister Mai, goes to school. Her parents explained that Mai's education is ensured till she completes upper secondary school. I soon sensed why Huyen did not like her sister. It was not, as far was I understood, because she hated her sister as a person. But rather, she found it difficult to accept the fact that, by sheer luck, her sister had obtained what Huyen had lost in order to share in the family's hardships. Strikingly, however, Huyen denies being envious of her sibling. As discussed earlier, children wished to pursue education and strongly desired to be released from the burden they shoulder. Why would they not be envious if they thought other children happier? The reason may be sought in how Vietnamese society oppresses poor children and prevents them from having dreams that are felt as unrealistic and unattainable. As said, among those who feel inferior, Confucianism feeds a sense of self-denial (*biet kinh tren nhuong duoi*) and divides society. As they become aware of their social position, the children of the poor understand and internalise that only the rich are entitled or deserve to demand for what they wish but not the have-nots:

Aiko   What do you think of those children who go to school?
Huyen   I feel sad (because I cannot go to school). But I don't envy them.
Aiko   Why?
Huyen   Because I'm not permitted to envy others.
Aiko   Why do you feel that?
Huyen   They can go to school and I cannot. It is just a fact, so there is no reason for me to be envious with those who can.
Aiko   But why do you think you are not permitted to envy?
Huyen   Because if I stay envious with others, I'll make my parents sad… To be honest, I envy those who can go to school, but I cannot say it loudly. I keep these feelings to myself. I don't want to tell others about it.

When children were asked whether they wish to go back to school, those who had to drop out of school to help the family showed mixed feelings. They tended to feel that it was too late or too embarrassing to start from the lower grades from which they had dropped out and sit with younger pupils in the class. Dong felt regret for leaving school as most of his friends are still in school. Likewise, Minh also felt contrite about having dropped out. Nonetheless, he never tells his father about it because he knows that if he goes back to school, he could no longer help the family.

In sum, children make a significant distinction between the world of the poor and the world of the rich. Seeing their world from the perspective of the latter leads them to devalue what they do. Powerful socio-cultural structures oppress poor children and lead them to behave according to social expectations. And eventually, children accept their roles to be nurturing. By looking at broadly three tensions that inform street working children's lives, I have shown that they are individual social beings who struggle but seek to make sense of their lives and negotiate the value of what they do. In a society in which the importance of market expansion grossly outweighs the protection of the weak, government policies to 'save' them are ineffective. They not only fail to support children working on the streets, but rather hamper their search for livelihood. Far from being nurtured, the children of the poor feel responsible for the well-being of their family. As if there were no other option than accept reality, children persuade themselves to share in the hardships of the family, regardless of

their actual wishes to pursue education and play. Even if they do not oppose their parents, their lives are meshed with tensions between what is expected from a 'good child' and their desires, kept at a deeper level, to be like nurturing children.

5.   Conclusion

Poor children working on the street may seem, at the first sight, as a group of undifferentiated children who can be legitimately labelled 'street children'. However, as I have been contending, each child has a different reason for being on the street, and different ways of viewing why s/he is using the urban space for work. In other words, the category 'street children' is wrongly equalled with a social phenomenon. Sociologically, the children labelled as such are a part of a far larger group of 'nurturing' children of whom only a small part happens to work on the streets. The term 'street children' actually reflects that for policy makers what cause concern are not the hardships that these children face, but their very presence and visibility on the city streets.

The analysis in this paper has attempted to show why childhood is not an unchanging or universal thing but a social process made by children, both those that are nurturing and those that are nurtured. Children are social beings who have agency to come to terms with the tensions and negotiate values of their childhood. Children of the rich and the poor in Vietnam experience different practices of childhood and are expected to do so by their parents and society at large. Many children of the poor described their childhood as less happy than those who do not need to work and said that they shoulder a heavy economic burden to nurture their families from an early age. They face numerous tensions in their everyday life but somehow find ways to appropriate and contest the growing gulf between nurtured and nurturing childhood.

Rather than providing a complete picture to understand the diversity of childhood, the current discourse on childhood fails to account for dynamic socio-cultural constructions specific to a particular context in which they are enacted. More specifically, it fails to explain the childhood dichotomy, in which only rich children are able to become closer to the now dominant Western model while poor children seem to be fated to become increasingly nurturing. As shown, the tensions between nurturing and nurtured childhood that street working children experience is welded to a world in which the dichotomy between the rich and the poor is widening.

For further research, one should take into account the wider context of socio-cultural background to which those labeled as 'street children' belong to and how these notions are articulated in children's daily practices. In depth studies of how these notions and children's own perceptions interact would lead us to further understand the process at work in creating working children on the streets.

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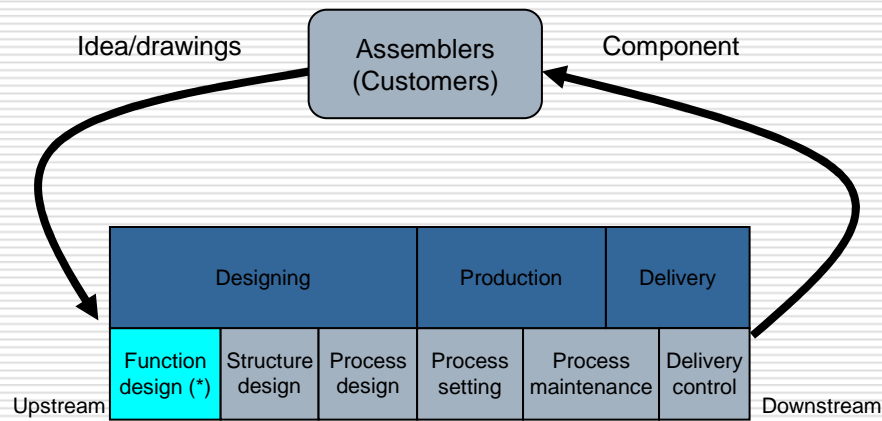
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ONE-PAGE PRESENTATIONS

Effects of Network Structures on the Technological Capability Improvement of Suppliers in the Newly Emerging Vietnam's Motorcycle Industry

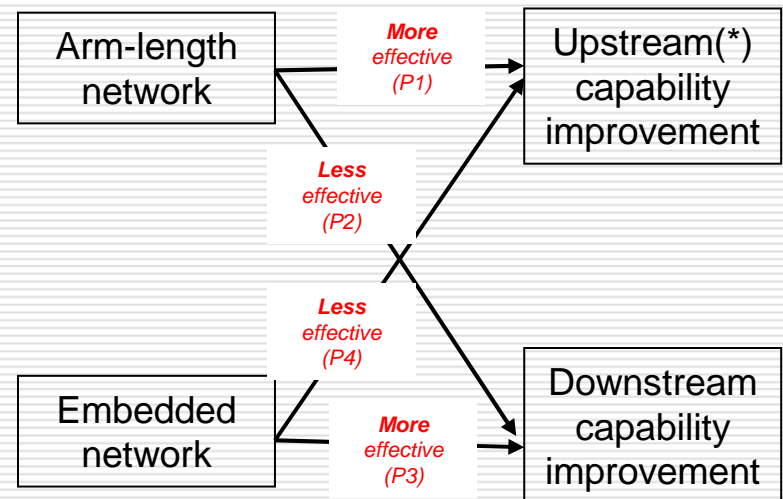(By PHAM Truong Hoang and SHUSA Yoshikazu – Yokohama Nat. Uni.)

Idea/drawings

Assemblers (Customers)

Component

Designing			Production		Delivery
Function design (*)	Structure design	Process design	Process setting	Process maintenance	Delivery control

Upstream ← → Downstream

(*) Function design is excluded from this research because firms in newly emerging companies, particularly suppliers don't have this capability

Source: Created by the authors based on Clark and Fujimoto 1991, Womark et al. 1990, Fujimoto 1998

Relationship	Arm-length	Embedded
Time	Short-term	Long-term
Distance	Far	Proximity
Volume of product	Small	Large
Information	Less exchanged	More exchanged
Combination	Low degree	High degree
Stableness	Unstable, ask for more governance mechanism	Stable due to self-guard mechanism
Example	Chinese motorcycle industry	Japanese automotive industry

Findings

Arm-length network

More effective (P1)

Upstream(*) capability improvement

Less effective (P2)

Less effective (P4)

Embedded network

More effective (P3)

Downstream capability improvement
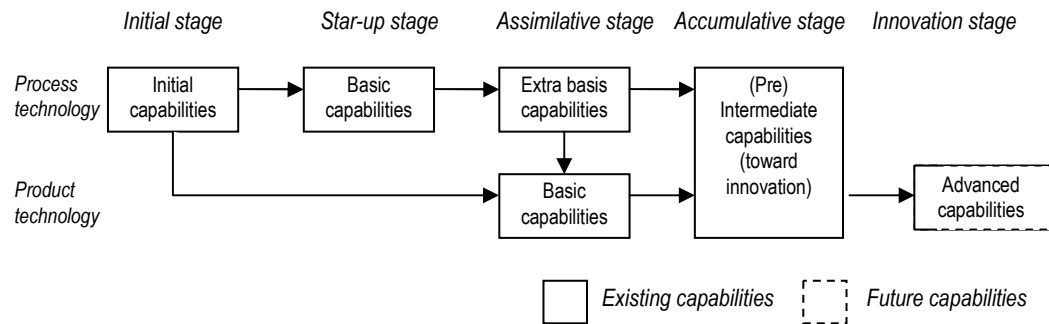
(*) "Function Design" capability is excluded

1. Correlation between capabilities (upstream and downstream) and network structure
2. Two patterns of capability improvement of suppliers
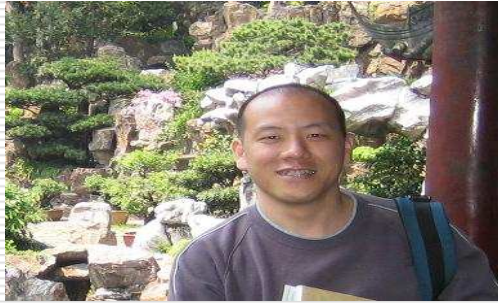
Growth of Firms in Newly Emerging Economies in the era of Globalization: the Case of the Vietnam's Motorcycle Industry
(PHAM Truong Hoang – PhD Student, Yokohama Nat. Uni.)

Capability improving in firms in older emerging economies*
(which can be seen also in some Vietnamese firms)

Initial stage   *Star-up stage*   *Assimilative stage*   *Accumulative stage*   *Innovation stage*

Process technology: Initial capabilities → Basic capabilities → Extra basis capabilities → (Pre) Intermediate capabilities (toward innovation) → Advanced capabilities

Product technology: Basic capabilities → ...

□ Existing capabilities   ⬚ Future capabilities

* Adapted from Lall (1992), Figueiredo (2002), Kim and Lee (2002), Ivarsson and Alvstam (2005)

Newly emerging economies in globalization era

1. Liberalization of trade and investment
2. New "bargain" power of MNCs
3. Investment from older emerging economies
4. Development of technology

Growth of firms in newly emerging economies

1. Diversification of paths of growth
2. Diversification of production networks
3. Diversification of sources of knowledge
4. Modularization and chances from network economy

New path of capability improvement of firms in the Vietnam's motorcycle industry

Initial stage   *Star-up stage*   *Assimilative stage*   *Accumulative stage*   *Innovation stage*

Process technology: Initial capabilities → Basic capabilities → (Pre) Intermediate capabilities (toward innovation) → Advanced capabilities

Product technology: Basic capabilities → Extra basic capabilities

□ Existing capabilities   ⬚ Future capabilities
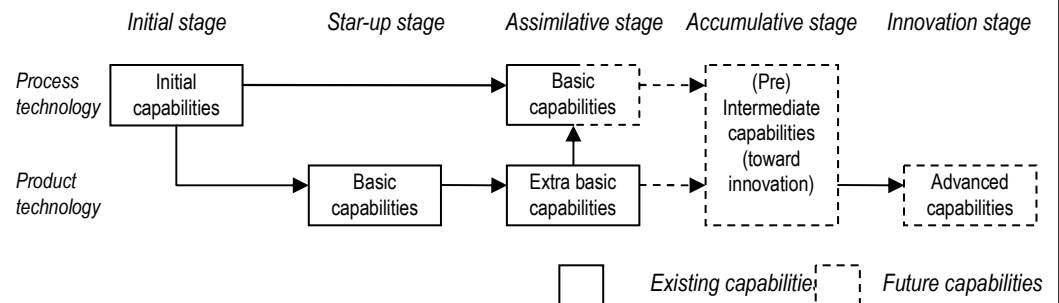
Source: created by the authors based on study result

Quality management and business performance in manufacturing companies - Empirical research in Japan and Vietnam

Phan Chi Anh- Quality Management Consultant, Vietnam Productivity Center
PhD Candidate, Business System, Yokohama National University
anhynu@yahoo.com, anhynu@gmail.com
080-6599-2402
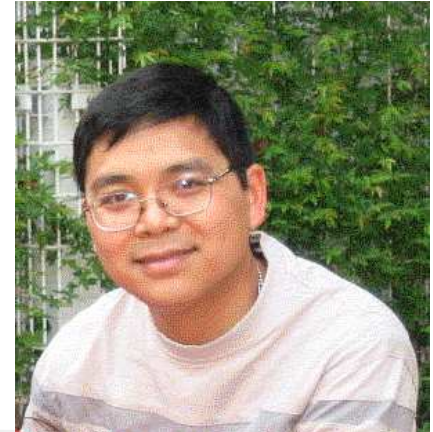
1. To identify the current situation of quality management practices in Vietnam industry and its impact on manufacturing performance. Impact of ISO 9000 and other quality improvement on business performance
2. Lesson from Japan: development of quality management, impact of quality practice on business performance requirement for quality management system, interaction between quality management and other management system: human resource, strategy management, technology management, JIT..
3. Toward the solution for development quality management in Vietnam manufacturing companies: ISO 9000 plus Japanese tool and techniques

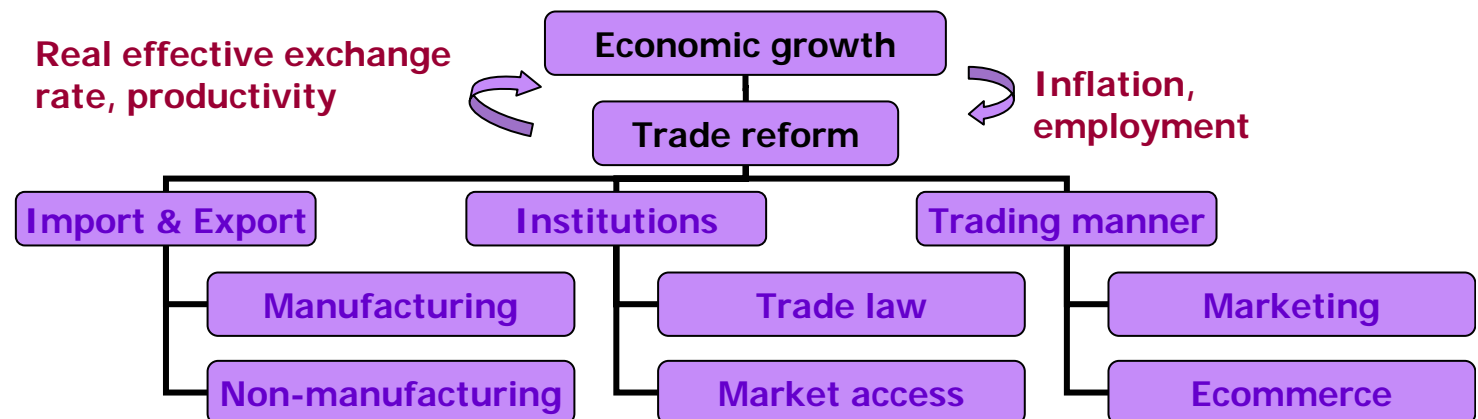Keyword: Quality management, ISO 9000, JIT, manufacturing performance

Quantify the impact of trade reform to economic growth on the way to WTO of Vietnam

One page presentation, Vietnam Development Forum, Tokyo July 2006

Dinh Thi Hoang Yen (GSID, Nagoya University)
Email: m060103d@mbox.nagoya-u.ac.jp

- Vietnam is on the final stage to join the World Trade Organization (WTO). Though Vietnamese trade (in goods) reform has been carrying out since 1990s, massive renovation on trade is being undertaken. How the process will be and what is its impact on economic growth are my main objects of study.

- The research will focus on some interactive channels which link trade to economic growth, namely exchange rate and price, productivity and employment. The structure of the study is elaborated on the below chart and the quantitative overall impact of trade reform to economic growth in the medium to long run is expected to be positive so that Vietnam can enjoy some benefits from the WTO accession. Specific policy implications will also be drawn from the simulations for trade scenarios of Vietnam.

Real effective exchange rate, productivity

Inflation, employment

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                    Economic growth
                      Trade reform

Import & Export        Institutions        Trading manner

   Manufacturing        Trade law             Marketing

   Non-manufacturing    Market access         Ecommerce
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Economy-Wide Effects of Remittances
A Computable General Equilibrium Assessment from Vietnam

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This paper is part of my PhD research.

- Recently the inflow of overseas remittances increases rapidly in Vietnam and becomes a significant one comparable with that of FDI as its value reached around 10% of GDP in 2005. This paper is a first attempt to access the effects of the remittances on the Vietnamese economy using (static) computable general equilibrium (CGE) modeling.

- A Social Accounting Matrix (SAM) derived from the Vietnamese SAM 2000 will be used as the base year data. Since I hypothesize that overseas remittances might be invested to small-scale businesses, I re-aggregated the SAM in such a way allowing me to focus in agricultural and small-scale sectors.

- Simulations results are expected to show that the remittances play an important role in improving Vietnam's economic capacity and welfare, and with an increase in overseas remittances, some small-production sectors would be expanded.

Strategy for Vietnamese Local Government to Prosper under the Era of Globalization

~ Case Study: Thanh Hoa, the North Central Coast Province of Vietnam ~

Do My Hien,

Graduate school of International development, Nagoya University

Department of International Cooperation Studies (email: o060405r@mbox.nagoya.ac-u.jp)

My current theme and approach for studying

- My concerning is poverty reduction and balanced development between urban and rural areas in Thanh Hoa province. It is renewed and continued research from my studying of M.A thesis in Economics (Shinshu University)

- "What is the best planning for local governance?", "How can the local people improve their welfare?", "What should we act to find out the solution?"

  I am seeking the answers to them by analyzing social community and local government policy. I am also interested in "*strengthening potentiality of endogenous development.*"

- Suggesting political advice for local government, people, and committee is my last purpose for the study! Believe that, "I will be one of the women who act from academy *!!*"

Vietnam's Post-WTO Industrial Policy: Old Lesson Still Works

Most of Vietnam's industrial issues should be solved under the enterprise-oriented approach.

Mai The Cuong
(VDF Researcher & NEU Lecturer)
mtcuong@vdf.org.vn

Like other developing countries when they become WTO members, for achieving the industrialization goals, Vietnam must solve the issues of how to protect the infant industries in the liberalization context, how to attract more FDI and create a linkage between the FDI sector and the domestic sector, and how to adjust and coordinate trade policy and industrial policy.

The world experiences showed that the government should design a sound mechanism that can ensure the linkage between policy makers and entrepreneurs. However, the point is not only how to apply enterprise-oriented approach from the world in Vietnam's process of policy making and adjustment, but also when and at which degree Vietnamese government actually does this work.

Development of Supporting Industries for Vietnam's Industrialization
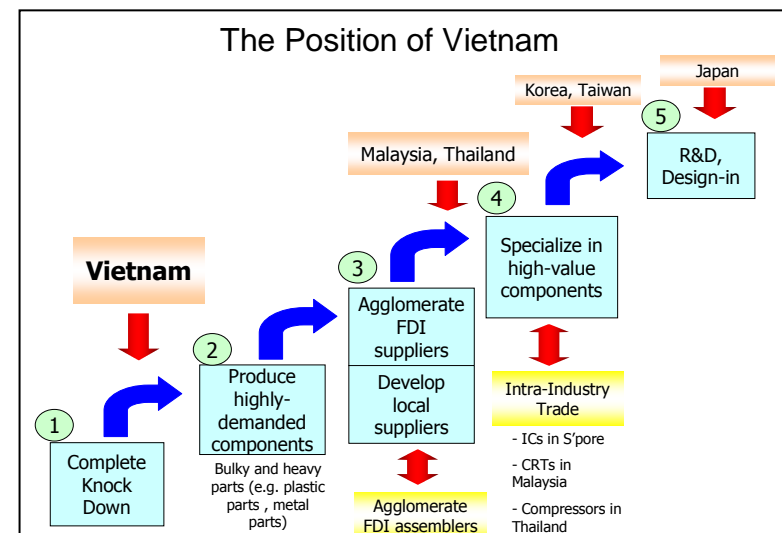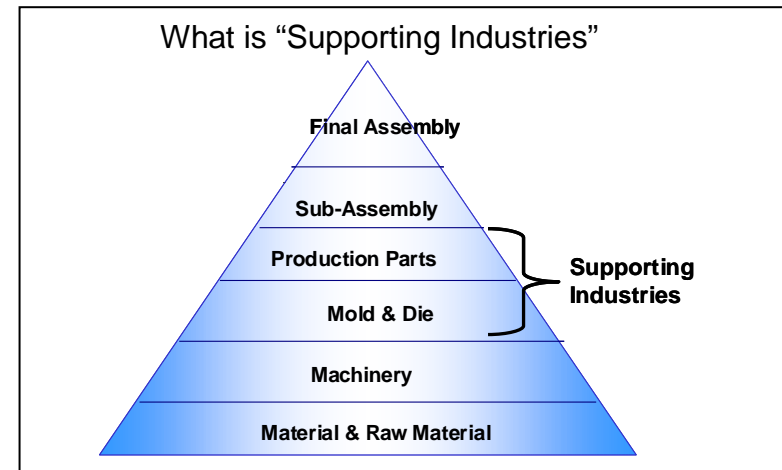
Junichi Mori (GRIPS/VDF Tokyo Researcher)
e-mail: jmori@grips.ac.jp

This paper was written as my master thesis at the Fletcher School, Tufts University. It discusses: (i) the definition of supporting industries (SI), (ii) economic growth through development of SI, and (iii) means to develop SI.

<Main Points>

- SI is defined as a group of industries to supply "manufactured" inputs, such as production parts and molding tools.

- The development of SI is necessary for amplifying FDI's positive externalities.

- However, limited demand size and information gaps impede the development of SI in Vietnam.

- The problem of limited demand size can be overcome by either "horizontal" or "vertical" business expansion. Technology upgrading is needed.

- The establishment of a collaborative training program between MNCs and domestic SI is highly recommended to reduce information gaps.

- Learning from the Penang Skill Development Center in Malaysia, high-level industrial agglomeration of open-modular products is a key to attract MNCs to a collaborative training program.

What is "Supporting Industries"

Final Assembly
Sub-Assembly
Production Parts
Mold & Die
Machinery
Material & Raw Material

Supporting Industries

The Position of Vietnam

Japan
Korea, Taiwan
Malaysia, Thailand
Vietnam

1 Complete Knock Down
2 Produce highly-demanded components — Bulky and heavy parts (e.g. plastic parts, metal parts)
3 Agglomerate FDI suppliers / Develop local suppliers — Agglomerate FDI assemblers
4 Specialize in high-value components — Intra-Industry Trade
5 R&D, Design-in

- ICs in S'pore
- CRTs in Malaysia
- Compressors in Thailand

Supporting Industries: A Review of Its Concepts and Development

Nguyen Thi Xuan Thuy, MOI VN & VDF-Tokyo

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- This ongoing paper will review different concepts of Supporting Industry (SI) as well as related concepts. The paper attempt to propose an appropriate policy oriented definition of SI.

- International experiences in development of SI will also be reviewed in order to provide policy implications for Ministry of Industry of Vietnam (MOI) in promoting SI in Vietnam.
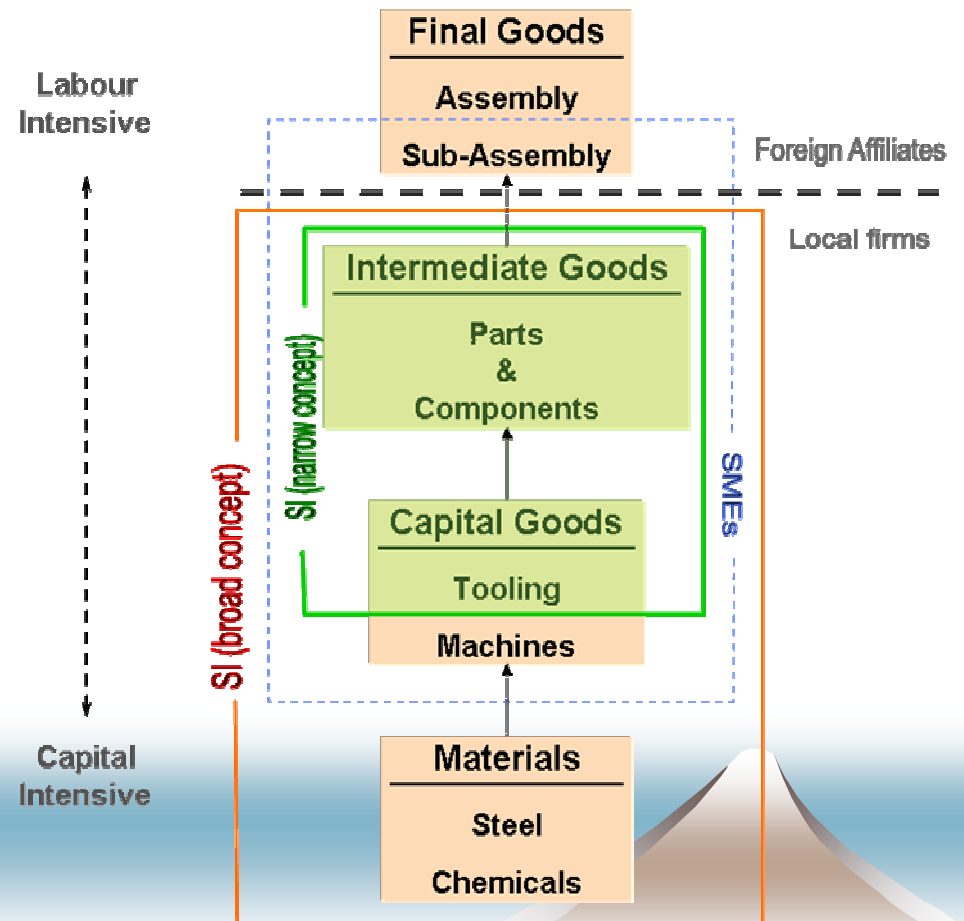
Transportation in and around Hanoi

Nguyen Ngoc Son (VDF Researcher and NEU Lecturer)

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- **Urbanization**
- **Industrialization and modernization**
- **Economic structure transition**
- **Globalization**

Big Problems of Transportation in Hanoi area

- Poor transportation infrastructure.
- Traffic congestions getting more serious.
- Shortage of investment capital to develop traffic infrastructure.
- Poor traffic and transport master plan in both building and carrying out steps.
- Traffic accidents.
- Pollutions.

- How to reduce the gap between demand and supply in urban transportation infrastructure and transport services?
- How to maintain sustainable urban transport in Hanoi?

Planning and Institutional Issues

Traffic Management

Financing Issues

Regulatory Issues
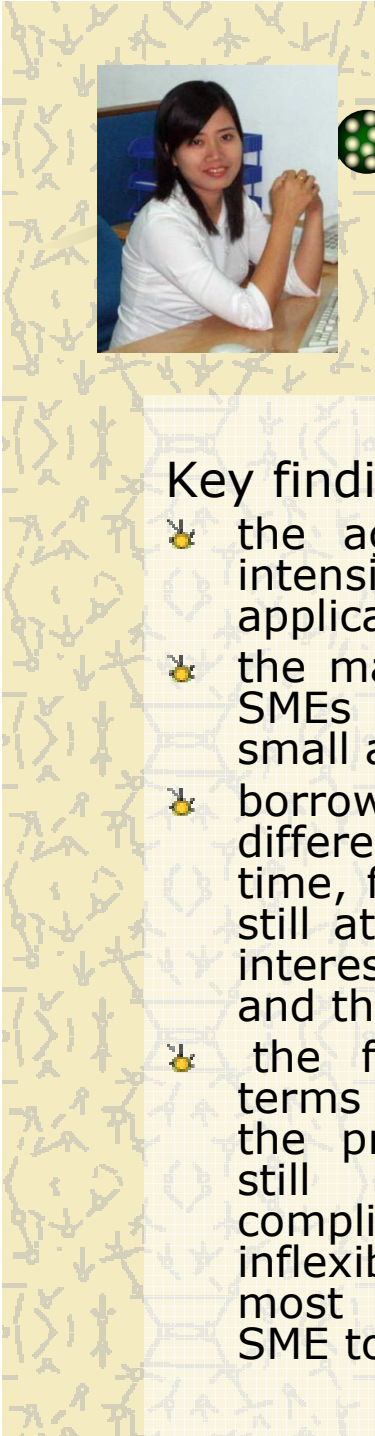
Current Business Situation and Credit Approach of Agro-SMEs in Vietnam

Tran Thi Thanh Tu, Lecturer (NEU), Researcher (VDF)
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Key findings:

- the agro-SMEs are very labor-intensive, technological application is limited
- the main output markets of agro SMEs are limited, undiversified, small and segmented
- borrowers get loans from different sources at the same time, for SMEs, informal sector is still attractive in spite of its high interest rate and short duration, and the growth of formal sector
- the formal sector is weak in terms of the following aspects: the procedures of borrowing is still troublesome and complicated; its interest rate is inflexible; collateral is still the most difficult condition for an SME to get a formal loan.

How to improve credit approach of agro-SMEs:

- banking services in terms of quantity and quality should be improved
- collateral requirement should be re-considered
- procedures for lending should be simplified, but the core principles for risk management should be kept;
- loan maturity should be approriate with bussiness cylce
- interest rate should be more flexible

Street Children in Vietnam

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Since the street children are not a homogeous group, intervention must also be diversified according to the needs of each type of children. In this paper, we propose a new typology of street children based on *causes* and *situations.*

• The causes of driving school age children to the street can be divided onto 3 mains groups which we shall call broken family, mindset problem, and economic migration.

• The situations that street children face to can be divided into two dimesions, namely, the degree of *current protection* and *investment for future.*

• There are 3 groups of street children who need different assistance and guidance.
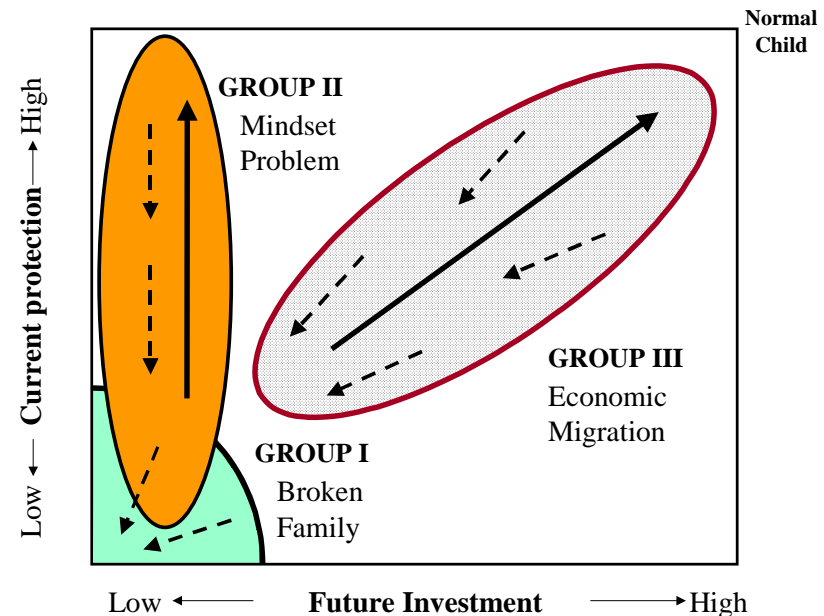
The vertical and horizontal axes represent the two dimensions of the situation of street children. On the other hand, groups classify street children by their causes. The solid arrow indicates the aspiration of each group while the dashed arrow indicates unexpected setbacks.

VIETNAMESE EDUCATION FROM THE SYSTEMATIC POINT OF VIEW

Nguyen Hung Phong *(Dr. Sc., NetCracker Technology),*
Nguyen Phuong Hoa *(PhD, College for foreign languages, VNU)*
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We propose a model that helps to identify the root causes of the educational issues (faults). Using this model, the analysis of the complex links and causes of the tardiness of Vietnamese education system could be carried out. Therefore, it would be useful for education management institutions in finding solutions and identifying the policies for education.

• Current state of Vietnamese education is rather worrying .

• Proposed solutions are experience based, straightforward and copies of foreign models without analyzing peculiarities of Viet Nam.

• Most of educational problems have causes from different resources and are not pure educational.

• We have to find causes in complex relations of society.

• "Education is a mirror of society". We cannot reform education without reforms of other systems
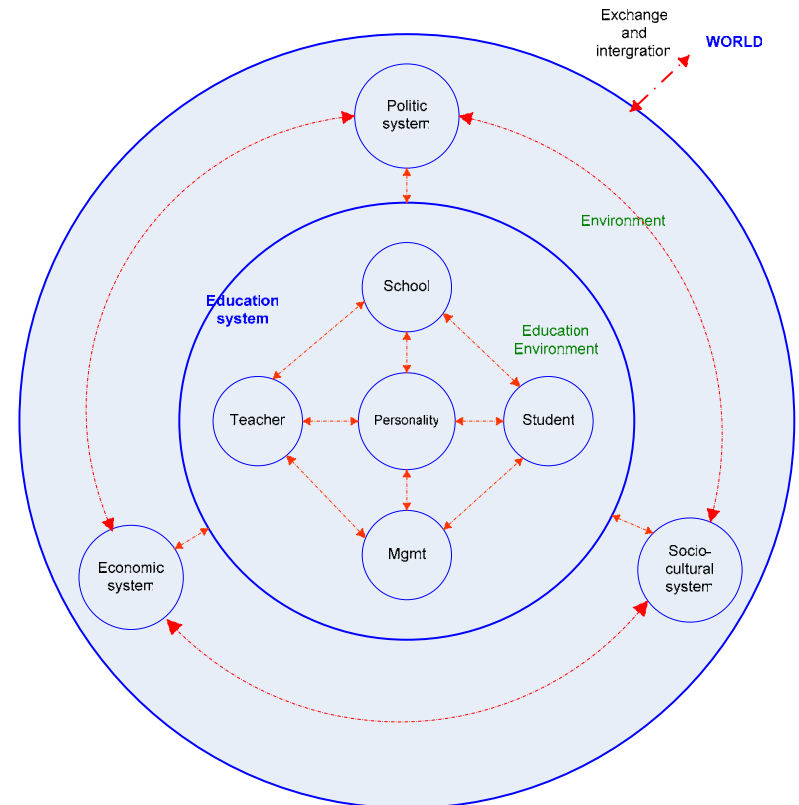
Job Markets for the NEU Graduates

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How to reduce the gap between professional education and job requirements?

What are job markets for the NEU graduates?

- **After graduation:**
  - How soon to get a job?
  - Can they apply what they have learnt in reality?
  - Further education?
- **Migration from rural to urban areas**
- **Job types**
  - Which organizations?
  - Income and fringe benefits?
  - Opportunities to get promoted, get part-time job, further training, etc?
  - Job satisfaction?
- **How to meet the requirements of job markets?**
  - Professional knowledge
  - Other skills: social, computer, communication?

To students: Sketching out career development orientation, and equipping with required and necessary skills for future careers, etc.

To NEU: Directing students towards proper orientation, setting up job market–oriented education program with regular updates, etc.

Pension Liabilities and Generational Relations: The Case of Vietnam

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This paper (Working Paper No.106, the Oxford Institute of Ageing (OIA), the University of Oxford, March 2006) estimates the size of pension liabilities and discusses generational relations for the PAYG DB pension scheme in Vietnam in a future aging society.

- Although the size, estimated by *closed-group approach*, is small in comparison with GDP2002, it indicates *implicit* debt to the government, and these liabilities are eventually paid by taxes. Therefore, current pensioners are winners, and current workers may be losers in the "generational battles". The "battles" will be more severe if the economy is dynamically efficient.

- Intertemporal budget constraint is used to cushion financial shock, and redress generational balances.

- Reforms with sound governance and regulatory framework are immediately needed, and notional defined-contribution (NDC) is considered as an appropriate way to pursue.

- ***On-going related studies:*** (1) use stochastic simulations to re-estimate and address the issue in more details, and (2) explore a reform with notional defined-contribution (NDC) scheme.

"Do you have a minute to talk about your retirement years?"

Introducing a Non-contributory Pension Scheme in Vietnam: An Exploration

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http://www.runsystem.net/long

This on-going research focuses on designing, implementing, and simulating possible impacts of a non-contributory pension (NCP) scheme in Vietnam, which aims to reduce risks to vulnerable groups in the society.

• NCP is a social protection scheme, which provides *monthly* benefits (in-kind or cash) to the vulnerable groups, esp. the old and poor, who *do not* need to contribute anything to the scheme. The current NCP schemes in the developing world are contributing significantly to poverty reduction through improving economic, social, and health status.

• Although Vietnam has gained remarkable social and economic achievements since *Doi moi*, many people are still out of the social security scheme due to numerous reasons.

• This research argues that it is right time to have such a scheme in Vietnam in order to further reduce poverty incidence. It will consider the following issues.

- Type of scheme: universal vs. means-testing
- Benefit type: in-kind vs. cash
- Financial viability simulations
- Administrative management of the scheme