1. Purpose and Methodology

How to achieve industrialization while promoting trade liberalization is a perennial question for all latecomer countries including Viet Nam. Since the dramatic opening of economic relations in the early 1990s, the integration process has proceeded rapidly in Viet Nam, leading to large inflows of FDI and ODA, entry into ASEAN and APEC, ongoing negotiations for WTO accession, the Asian crisis and its aftermath, and accelerating competition to attract FDI in East Asia. From the beginning of the Joint Viet Nam-Japan Research (JVJR) project in 1995, a majority of Vietnamese policy makers and business leaders have well understood that international integration was essential for systemic renovation and economic development, but that at the same time serious preparations were needed to meet this challenge effectively. In particular, in the past phases of the JVJR project, the Vietnamese and Japanese researchers have emphasized the importance of establishing comprehensive and concrete long-term development strategies for the entire economy as well as for individual key industries.

Up to now, however, the Vietnamese government and business community have not presented sufficiently concrete industrial strategies suitable for the age of integration, nor has identification of candidate industries for promotion (or downsizing) been made. Meanwhile, the AFTA deadline of 2006 is approaching and WTO entry negotiations and the tariffication of NTBs are continuing. Without a clear national industrial vision, consistent designing of industrial promotion and import protection policies, including determination of individual tariff lines, is impossible. The lack of such a vision greatly increases uncertainty associated with the business plans of both domestic and foreign enterprises.

In the third phase of the JVJR project, Trade and Industry Group attempted to
produce studies that could help to overcome this problem. While continuing to
investigate general issues related to integration, our main focus in this phase was to
intensively examine a very limited number of industries and generate concrete and
meaningful policy recommendations. We have chosen (i) steel and (ii) textile and
garment for this purpose. Both industries had been studied in the past, but changing
circumstances require continuous updating of analysis and advice. Moreover, past
studies were often descriptive and superficial, without proposing practical options for
solving specific problems that Vietnamese industries were facing.

We did not necessarily agree on key issues nor reach any consensus. Our
reports are intermediate outputs in the ongoing and never-ending research and thus
should not be construed as final. Despite remaining tasks, however, we feel that certain
progress was made in the study of the steel industry, which was scrutinized to the
extent that had not been done for other heavy industries in Viet Nam. We consider the
very process of this cooperative research to be important, apart from whatever tentative
conclusions we have reached.

The methodology of steel industry research initiated in this phase can be
recommended for similar research on other industries. Above all, the primary emphasis
was placed on gathering concrete facts and debating actual problems, rather than
general advice or theoretical modeling. We tried to stay away from preconceived
conclusions not firmly based on local facts. Fruitful cooperation among specialists of
various backgrounds (top managers, foreign businesses, government officials, technical
experts, policy analysts, and university professors) enriched our perspective. The
Vietnamese side was extremely open with providing facts and discussing plans and
problems, and the Japanese side was able to produce preliminary but specific
recommendations based on a large number of policy dialogues and factory visits.

In previous research projects by JICA and other donors, foreign researchers
often spent much time in gathering basic information (which the Vietnamese experts
already knew) and wrote up reports unilaterally without sufficient interaction with the
Vietnamese side. At the final presentation, discussion was often too short and the
reports did not exactly answer the Vietnamese needs. In this phase, we tried to have
substantial discussions between the Vietnamese and Japanese side, as well as among
Japanese members, before main conclusions were reached and paper drafts were
finalized. The intensive steel seminar in October 2000 was extremely useful in
identifying common grounds and remaining disagreements. Some authors significantly revised their papers based on the results of this seminar. Before the main Workshop, drafts and comments were exchanged electronically and papers were later presented in a small pre-Workshop session. Thus, we could devote most of our time at Hanoi Workshop to further discussion rather than paper presentation. The project also played a catalytic role in bringing Vietnamese officials and academics together who would otherwise had much less contacts.

We also relied heavily on the outputs of past and concurrent Japanese ODA programs, including the JICA steel masterplan in 1998 and JICA cold rolling mill feasibility study in 2000. Daily contacts between VSC’s top management and a JICA resident expert (Nobuyoshi Tanaka) since 1997 was instrumental in deepening our knowledge and discussion. Moreover, we cooperated closely with experts in the General Commentary Group of the JVJR project (Koichiro Fukui and Takao Aiba) in conducting the intensive steel seminar and producing the reports.

We also welcomed the participation of professors and researchers of National Economic University (NEU) in the second half of this phase. Although the NEU teams were organized to conduct another Viet Nam-Japan joint research project, we invited those teams with overlapping research interests (general studies, steel, and textile and garment) to participate in the intensive steel seminar and present their preliminary views and findings at Hanoi Workshop.

2. Steel

Intensive steel seminar

At the initiative of DSI, a one-day seminar was organized by JICA and DSI on October 16, 2000 in Hanoi, to review VSC’s production and investment plans, possibility of integrated steel works, and other policy issues. The number of active participants, consisting of concerned Vietnamese officials and Japanese experts, was fifteen. The Japanese side raised several issues regarding the feasibility of the proposed plans. This seminar greatly contributed to the clarification of issues and served as an important input to the main Workshop.
Pham Chi Cuong (VSC) and Nguyen Huu Tho (VSC) explained the VSC's current plans with the details of the three production and investment scenarios (base, high and low) which had recently been approved by the government. The key points included the following. First, the two-track approach should be adopted, that is to say, relatively small and downstream plants should be constructed first and separately from the preparations for large and expensive integrated steel works at a later time. Second, production of flat products must be initiated, but the details remained undecided. Third, expansion of steel making capacity should be achieved mainly through large-scale integrated works rather than electrical arc furnaces (EAF). Fourth, with regards to the rehabilitation of Thai Nguyen Iron and Steel Corporation (TISCO) and Southern Steel Corporation (SSC), an aggressive expansion of inland TISCO should be reconsidered, and SSC should improve efficiency by combining the consolidation of existing facilities and investing in new plants.

Kenichi Ohno (GRIPS) presented a spreadsheet model to numerically evaluate alternative steel development plans and four associated major uncertainties—financing, price fluctuations, tariff protection and investment timing. This model incorporated available technical and financial information of 1998 JICA masterplan as well as updated opinions of steel experts. Some of the findings were as follows. First, rapid construction of integrated steel works would require funds way above VSC’s borrowing capacity, while a more gradual approach would require a less formidable (but still very large) sum. Second, even in a gradual approach, financing would be hard to find and heavy reliance on domestic or foreign loans would result in a huge debt stock and a string of losses in the initial years. Third, on the assumption that international steel prices would continue to fluctuate as in the 1990s, the possible range of profitability was calculated. Fourth, the effects of alternative tariff scenarios were numerically evaluated. However, a large or permanent deviation from AFTA would not be acceptable because of international commitments and the adverse impact on steel-using industries.

Nozomu Kawabata (Tohoku Univ.) identified various technical issues in Viet Nam's steel promotion. Success requires a long-term perspective and exposure to international competition. To secure efficiency, different plants and processes must be integrated technically rather than independently invested. TISCO as well as certain steel mills in India failed due to technical fragmentation. The gradual construction approach with due attention to technical integrity was recommended. By building slowly, Viet Nam could choose from ever-expanding technical options. The product mix
should also be selected carefully, avoiding direct clash with underpriced CIS exports. High import protection should be avoided; instead a combination of low protection and productivity improvement should be encouraged. Ambiguous FDI policy, high electricity tariffs (especially for foreign-invested producers), and inconsistency between entry and trade policies also needed correction. Free entry under heavy import protection was attracting inefficient and opportunistic producers, leading to overcapacity.

Fukunari Kimura (Keio Univ.) noted that the possibility of import protection was slim in the future. The AFTA deadline might be delayed a little due to Malaysia's plea for automobile protection, but it would begin to bite sooner or later. WTO no longer would allow high tariff ceilings for new members. From now on, Viet Nam's industrial policy must assume very low tariffs. In the rest of ASEAN, inflows of FDI contributed to the establishment of supporting industries for metals and machinery. If Viet Nam protected steel too much, resulting high costs would discourage FDI and the policy to nurture supporting industries would fail.

Takao Aiba (JERI) stated that VSC's investment plan looked very risky. By international criteria, the maximum amount of bank loans available would be roughly ten times the cash flow. This meant that VSC could comfortably borrow only $100-150 million, compared with $6 billion required for integrated steel works. A string of losses predicted by Ohno's simulation would further discourage potential lenders. From the viewpoint of credit analysis, VSC's plan was out of question and should be reconsidered.

Cuong replied that steel promotion was a national project with broad economy-wide objectives, and its desirability should not be judged from the VSC's finances alone. The government should take part in it, as other ASEAN countries had done.

Nobuyoshi Tanaka (JICA expert) recommended that initial investments with relatively small capital requirements should be separated from the proposed large-scale integrated works. Flat products should be produced as soon as possible to partially—but not fully—meet the increasing domestic demand (30-50%). The main products should be ordinary carbon steel of high quality. For this, up-to-date technology must be chosen such as 6Hi for CRM, Coil-Box-Tamdem for HSM, ladle furnace, etc. For steel making, BF-BOF should be the main technology, with EAF playing a supplementary role. Metal sources must also be carefully selected. If imported scrap were to be used,
supply must be secured by long-term contracts. If DRI was selected, its technical specification must accommodate the quality of domestic coal. Smelting direct reduction was not yet proven technology and thus should not be selected.

Do Huu Hao (MOI) explained the steel promotion strategy under consideration by MOI. Import substitution of various steel products was the primary goal. To achieve this, traditional technology (BF-BOF) and other technology (DRI, EAC+CC, etc.) would be combined. Ways to utilize domestic raw materials such as Thach khe iron ore should be explored. Financing should be mainly domestic, but joint ventures could also be invited. The government should consider various ways to finance the steel industry including long-term policy loans, subsidized electricity and gas prices, etc. From now on, upstream processes (steel making) would be emphasized since downstream processes (rolling) were already developed. The targeted steel self-sufficiency ratio would be 70-80% by 2010. Three steel industry centers—Thai Nguyen, Ha Tinh (with Thach khe mine) and SSC—should be established.

Toshiki Yabuta (Nippon Steel Corporation) stated that steel is a heavy industry with extensive industrial linkage, but it also consists of huge, complex and subtle processes. Perfectly managed steel works can produce final products in three weeks but very few producers in the world can achieve this. Emergence of just one problem significantly reduces the operation ratio and profitability. Many producers purchase machinery without acquiring necessary operation and maintenance skills. The gap between rising demand and depreciating equipment must be narrowed by constant maintenance and revamping. Integrated steel works also require a large number of managers, engineers and computer systems. It should be recognized that efficient operation of a large steel complex is a formidable task requiring a long training period.

Bui Van Muu (Polytechnic Univ.) argued that Viet Nam should construct integrated steel works by 2010 and preparation should begin right away. Feasibility studies of domestic raw materials (such as Thach khe ore) should be conducted. In the initial stage, temporary import protection was needed and absorption of necessary skills must be accelerated. As to Thai Nguyen, it was situated far from raw materials or markets and should not be selected as a steel center. JICA conducted many studies, but Viet Nam also needed to translate these studies into concrete investment plans, with attention to financing, management skills, domestic supply of inputs, etc.
Hoang Duc Than (NEU) also noted that JICA studies must be broadened to include financing, cost-benefit analysis, etc. Steel was a national industry justifying official support. Its feasibility must be evaluated not just from VSC's performance but from the perspective of the national economy. Modern technology must be adopted to achieve competitiveness, but that requires official support. In Viet Nam, some politicians support rapid development of the steel industry at any cost, but importers after short-term profits generally want cheap foreign steel. We need more studies on domestic market and materials. Integrated steel works should be constructed after 2005 and completed in the early 2010.

Ngo Tri Phuc (Polytechnic Univ.) said that Viet Nam's steel industry suffered from high cost, outdated equipment and low quality. Despite this, as Kimura argued, international competition under AFTA was inevitable. But construction should concentrate on large-scale modern steel works, and smaller investments on independent plants should be avoided. Official financial support must be provided. As to domestic raw materials, Vietnamese studies must be conducted in addition to foreign studies. The quality problem of Thach khe ore could be overcome, and inland location of Thai Nguyen was not a big problem. In conclusion, integrated steel works must be established as soon as possible, even before 2010.

Kimura remarked that VSC should sustain policy to eliminate inefficient plants and support relatively efficient ones. Protecting inefficient plants at the sacrifice of efficient ones was unreasonable. Ohno noted that Thai Nguyen's high transportation cost could not be eliminated by improving roads since roads between Thai Nguyen and Hai Phong were already good. Yabuta and Ohno also indicated that using high-zinc ore from Thach khe would seriously compromise the efficiency of steel production.

Discussion at Hanoi Workshop

At Hanoi Workshop on December 8, 2000, Ohno (as a co-chairperson) first summarized the results of discussions so far, main conclusions of the contributed papers, and the policy recommendations by the Japanese side. The remaining time was devoted to comments and further discussion.

The Japanese side presented eleven policy recommendations based on previous research and discussions. The main points were as follows:
1. Japanese experts conditionally support steel promotion, if realistic and concrete sequencing and methods were adopted.
2. Large-scale integrated steel works should be built gradually and in two tracks.
3. The first hot strip mill should be built in the south (Phu my).
4. Use of domestic ore as a main source was not recommended.
5. Future integrated steel works must be located in the central coastal region.
6. Proven state-of-art technology should be adopted (“fast-second approach”).
7. Foreign partners (JVs) must be attracted with realistic investment plans.
8. A large amount of additional investment in TISCO was undesirable.
9. Special steel production should not be attempted.
10. Ambitious export orientation should not be attempted.
11. Small and temporary deviation from free trade was permissible but only for a few industries with good promotion plans. With WTO, “market access” and “institutional convergence” must be considered on a case-by-case basis. WTO-consistent subsidies and emergency measures might be explored. Unreasonable WTO accession demands must be replaced by fairer treatment.

Cuong basically agreed with all the recommendations by the Japanese side. But Nguyen Kim Son (VSC) considered the Japanese studies still lacking in concrete and operational suggestions. He noted that Viet Nam was required to develop the steel industry in a very short time and without protection, unlike Japan or Korea. Uncertainty about future domestic demand was preventing the drafting of concrete production and investment plans. Financing, including available foreign participation, was also uncertain. Son hoped to receive clearer analyses and practical policies.

Ohno noted that uncertainty was an inherent part of business, and the JVJR project produced as concrete results as the present circumstances allowed. For example, Ohno paper quantified four uncertainties: (i) investment timing, (ii) financing options, (iii) price fluctuations, and (iv) tariff policy. There were also unquantifiable (and very serious) risks associated with the government's inability to respond properly to crisis and shifting environment. Uncertain domestic demand was not the largest problem as long as partial import substitution was the goal and a proper product mix was chosen.

Tanaka added that VSC's accelerated investment plan could not be realized even under the best circumstance, since preparations and construction would take certain amount of time. In order to fill part of the domestic demand for flat products, the
government must make decisions very quickly. As to domestic raw materials, its high zinc content would seriously reduce efficiency of blast furnace operation. The estimated cost of domestic ore would be about the same as that of highest quality ore imported from Australia to Japan, inclusive of freight charge. The capacity of proposed blast furnaces should be 5,000 m$^3$ or slightly less, in light of international experiences. Production of special steel should be ruled out. TISCO could survive as a small, local material-based plant but a large additional investment should not be made.

Kawabata said that Vietnamese managers often blamed old technology and shortage of funds, but an even more serious obstacle was institutional incapability. Mobilizing technology and resources into an integrated and successful business requires high institutional capability. Unless the government and enterprises improve on this, future investments would be in vain. For instance, the current oversupply of rolled products resulted from policy failure. Free entry under heavy protection encouraged inefficient and irresponsible producers while hurting sound firms. The government should establish trade-related laws, curb opportunistic entry, consolidate outdated plants, and use temporary protection with a sunset clause.

Le Minh Duc (MOI) emphasized two points from the perspective of the Ministry of Industry. First, steel must be designated as a national priority industry because of its importance in infrastructure and employment impact. Risk of not investing in steel was greater than the risk of over-investment. Second, FDI was concentrated in downstream rolled products which were now in oversupply. Foreigners were not interested in upstream plants, and it was the task of the Vietnamese people to upgrade this segment.

Dao The Tuan (retired) questioned whether domestic demand projection was scientifically made. Ohno replied that VSC and JICA were producing steel demand forecasts by both macro and micro methods with constant revisions. Nguyen Van Thu (MOI) stressed that the desirability of steel promotion must be evaluated from the viewpoint of the national economy, and its future comparative advantage must be carefully ascertained. Pham Quang Ham (DSI) affirmed a near-consensus that the main objective of steel promotion was import substitution, but concrete measures and steps had not been determined.
3. Textile and garment

Three papers were produced on the textile and garment. In general, all authors agreed that in quantitative terms, the output and export performance of the textile and garment industry looked quite good; however, its qualitative aspect was fragile. Moreover, Giam paper (below) warned that even quantitative performance was less than expected since the industry's share in total manufacturing output and export was either stable or declining.

The **Ham** paper reviewed the current status of the industry and identified problems. The key weaknesses included the following: (i) Low value-added content because of contracted nature of the garment industry. In order to shift from CMT to FOB mode of exports, investment in upstream processes was necessary; (ii) China, with more experience and lower cost, was a formidable competitor for Vietnam; (iii) R&D activity in textile and garment was very small and detached from actual production; (iv) The domestic private sector, despite its dynamism, had a very small potential. While inadequate policies were preventing their growth, the inherent problem of small producers seemed even more serious and difficult to solve.

**Duong Dinh Giam (MOI)** contributed a paper that stressed, among other things, the proper product strategy suitable for local circumstances. Given the limited ability of the Vietnamese garment industry, changeable high fashion items should not be targeted. The main products for now were middle range items such as knitwear, shirt, cloth and towels. Giam also pointed out the intra-industry linkage problem. The relationship between SOEs and non-SOEs was too weak, and the upstream (textile) and downstream (garment) segments were not well integrated. To improve linkages, the “Mother-Daughter Model” was proposed.

The paper by **Nguyen Ke Tuan et al. (NEU)** first reviewed the general environment surrounding the textile and garment industry such as wage and skill levels, international trends, etc. The present situation, policies, opportunities and challenges in Vietnam were also examined. The authors warned that increasing domestic material supply (including cotton) was desirable but not easy, due to both price and quality problems. They also recommended a significant reorganization of Vinatex, from the status of producers to an association (“Business Consortium Model”). As to promoting a shift from CMT to FOB exports, three prerequisites of (i) design capacity,
(ii) marketing, and (iii) financing, were pointed out. None of these was easy to solve.

Ohno posed the question regarding the extent to which upstream production should be built (such as cotton or artificial fiber). The scope of value-added expansion in downstream seemed much greater in textile and garment than steel. Moreover, labor- and skill-rich Viet Nam had a potentially very great but hitherto unexploited comparative advantage in garment production. Therefore, strengthening downstream garment might be a more suitable strategy than building upstream plants.

Giam reiterated the problems of textile and garment: (i) low value-added due to CMT; (ii) export performance was good but not quite up to expectation; (iii) lack of design and marketing ability leading to high cost and low value-added. There is vigorous entry and excessive competition, but intra-industry linkage remains weak. Labor is cheap and abundant, but efficiency is low. Products are uniform despite the diversity of demand. The Japanese paper (Sakai, General Commentary Group) was useful, especially the comparison with China, but applicability of Chinese experience to Viet Nam might be limited, and the proposed promotion plan appeared too slow.

Nguyen Ke Tuan (NEU) noted that the competitiveness of Viet Nam’s textile and garment industry was limited. Although Vinatex predicted strong growth of output and exports by 2010, a more careful assessment of the industry’s potential was needed. Some argue that garment is already internationally competitive, but they support the other, more pessimistic view. The global apparel industry evolves very rapidly and Viet Nam is at present unable to follow it. As to domestic cotton production, three problems (low quality, financing, high cost) must be overcome. For the industry as a whole, design capability, marketing and financing are the key. But the prospects of clearing these hurdles are not good.

4. General studies

We also studied general problems concerning industrial policy under international integration. Four papers were presented, but little time was allocated for mutual comments and discussion. Some of the ideas in these papers were incorporated in the discussion of steel industry promotion.
Mai Ngoc Cuong et al. (NEU) presented a paper on industrial policy. It contained a theoretical review and evaluation of international experiences in detail. The concept of industrialization was also examined. In policy advice, among others, the following were recommended: (i) human resource development was the key and thus should be accelerated; (ii) efforts toward adaptation of modern technology must be made; (iii) domestic and foreign saving mobilization should be strengthened; between these, domestic mobilization should be prioritized; (iv) further external integration and further systemic transition must be pursued simultaneously; (v) rural industrialization was also crucial. Ohno agreed that the concrete content of “industrialization by 2020” was ambiguous. He also wondered whether IT was the key industry in Vietnam and thus should be supported by the government.

The paper by Nguyen Van Vinh (DSI) reviewed industrial growth, FDI and industrial parks in recent years, and explained the trends of individual industries. Although the performance of industry was generally impressive, its competitiveness was weak and faced many integration challenges. Government policies for industrial development were discussed, and the concepts of industrialization and modernization were examined. Alternative development strategies were evaluated. The author recommended that the government should support industrialization through both state budget and indirect policies to affect resource mobilization. Starting from the current comparative advantages (labor- and materials-intensive), industrial structure should be gradually converted towards more processing, with greater value-added and industrial linkages.

The Kimura paper examined the current external environment within ASEAN. After the Asian crisis, other ASEAN countries generally turned to more aggressive liberalization in trade and FDI, but Vietnam was lagging behind. At present, traditional import substitution strategy was not impossible but required more careful design. WTO negotiations must be based on careful assessment of its policies and demands. Certain accession requirements were unreasonable, and Vietnam need not accept all demands, especially in market access and institutional convergence. There was also room to use WTO-consistent measures such as anti-dumping duties, countervailing duties, safeguards, certain investment policies, and non-specific subsidies. But the basic strategy must be oriented towards free trade. FDI was the key to ASEAN industrialization, and freer trade attracted more FDI. Japanese FDI preferred transparency, fairness, and predictability. Vietnam was seriously behind.
other ASEAN members in these areas.

The paper by Ohno reviewed theory, history and current environment of free trade, and explored the ways in which Viet Nam could achieve both integration and industrialization. While free trade promotion was a historical (rather than universal) doctrine and might impose costs on latecomer countries, weak domestic capability and increasing pressure to integrate precluded the use of temporary import protection. Thus, domestic capability must be strengthened before industry promotion can be attempted. To select industries, neither abstract theory nor econometrics was very helpful. Accumulation of in-depth study of each industry, such as the one for steel, was recommended. Tariffs above AFTA limits might be possible but under strict conditions—temporary, moderate, only a small number of industries, and with good industrial promotion strategies. Unfair demands on newcomers to WTO must be dealt with internationally.

5. Remaining issues

While there is a great need to investigate each industry in detail and propose concrete development policies, what we could achieve in the third phase of the JVJR project was fairly modest. Nonetheless, researchers in Trade and Industry Group feel that an important initial step was achieved, especially for the steel industry. Industrial studies are a continuing process, and we need to deepen the steel industry analysis and broaden the research into other important industries in Viet Nam. The analysis of textile and garment industry must also be strengthened.

In steel, we have examined the technical and financial policies in depth and certain concrete recommendations were produced in these areas. But similarly concrete proposals are also required in external policy—in particular, how to implement AFTA and negotiate WTO accession. In the near future, we wish to produce studies that would contribute to such strategies, including alternative tariff rates with explicit timetables, at least for major industries. This will require fuller understanding of the working of WTO and AFTA, including its political aspects.

Along with research into individual industries, Viet Nam also needs a comprehensive long-term development strategy for the entire economy, if analyses and
recommendations on individual industries were to be truly integrated. This point has
been made several times before, but its importance cannot be overstated. Unless a
consistent industrial vision is discussed and agreed, Viet Nam cannot execute the policy
of global integration with “ownership.”