

国際価格変動

国際鉄鋼市況は中期サイクルをもって変動する(図16)。アジアでは、最近の価格の山は1995年に起こり、その後の底入れは1999年にみられた。1999年末以降の市況は改善している¹²。1990年代のさまざまな鉄鋼製品の月次価格は互いに高い相関を示しており、また各工程間の価格マージン(スクラップ→ピレット、ピレット→条鋼・線材、スラブ→熱延鋼板、熱延鋼板→冷延鋼板など)は一定の平均値のまわりを変動してきた¹³。またすべての中間工程、すべての月において価格マージンは正であった。先に見たとおり(図4)、条鋼・線材とスクラップを除けば、現在ヴェトナムの鉄鋼市場は世界市場にかなりの程度統合されている。ただしアジアとヨーロッパの鉄鋼市場は密接に関連しているけれども完全に統合されているわけではなく、両者の価格は時折乖離をみせる¹⁴。

われわれのベースラインの仮定は、1990年代の各鉄鋼製品ごとの平均価格が将来の国際市場においても(変動なしに)持続するというものである。これに対し以下の第2、第3シナリオは、比較的高かった(1996年の)価格、あるいは比較的低かった(2000年の)価格がそれぞれ予測の全期間にわたり存続すると仮定する。だが実際には価格は変動するであろうから、これらの固定価格の仮定は非現実的である。そこで第4、第5シナリオでは、諸鉄鋼価格は1990年代とほぼ同じパターンで変動しつづけると仮定した。両者の相違はその波動のどこからはじめるかの違いによる。

その結果を図17、18に示す。このグラフを大雑把にみれば、価格が1990年代と同じように動き、同時に関税が下げられたとき、利潤と国際収支がどのくらいの幅で変動するかを示唆するといえよう。年毎にみると、価格変動が利潤と国際収支にきわめて大きな影響を及ぼすことがわかる。この影響は、一貫製鉄所が建設され国内で上流・下流過程が統合されたのちにとりわけ甚だしい。VSCはこの程度の利潤変動は十分覚悟しておくべきであろう。つまり、好況時に浮かれて利潤

¹¹ われわれはドルの代わりに円で借り入れた場合も試算してみた。もしわれわれのベースラインで50%とされている海外借入分を長期円建商業融資で調達するとし、円が(過去と同じ幅の上下動を繰り返しながら)年平均5%で対ドル増価すると仮定すれば、円ドルレート安定の場合と比較して、累積経常利潤は13.58億ドル減少し、年別にみると最大の減少は2019年の1.75億ドル減となる。このシミュレーションでは、円借入には満期10年、猶予2年、金利4%を想定した。

¹² ただし熱延鋼板の価格は2000年にも大幅に下落しつづけた。

¹³ 1990年1月-1999年12月の韓国輸出入価格を用いて各工程の価格マージンを計算すると次のようになる(単位はトン当りドル)。ピレット(平均97.6、標準偏差24.8)、熱延コイル(平均99.7、標準偏差29.2)、厚さ0.5-1.0mmの冷延コイル(平均93.0、標準偏差23.5)、厚さ0.5mm以下の冷延コイル(平均137.2、標準偏差37.8)。

¹⁴ 1994年1月-2000年3月の価格データを用いて2国間ペアの共和分関係を調べたところ、次のような結果を得た(ラグの長さはAIC基準による、検定は5%有意水準による)。熱延コイルについては、日本、韓国、中国、CISは互いに共和分関係にある(中国vs韓国を除く)。厚さ0.5mm以下の冷延コイルについては、日本の価格は韓国、中国、CISの価格とそれぞれ共和分関係にあったが、後3者の間にはそのような関係は検出されなかった。

を使い尽くすのではなく、逆境に備えて十分な利潤留保をしておかなければならない。

いうまでもないが、もし21世紀の国際鉄鋼市況がよい方にであれ悪い方にであれ、以前と根本的に変わってしまうならば、過去のパターンに基づくこれらの予測は大きく修正されなければならない。

関税シナリオ

将来における鉄鋼業の輸入保護政策はまだ決められていない。ここでは予測のために、以下の5つの関税シナリオを仮定することにする（非関税障壁は速やかに撤廃されるものとする）。関税率仮定の詳細については表2を参照せよ。

- AFTAシナリオ——すべての鉄鋼関税は2006年までに0-5%に下げられ、すべての国からの輸入に適用される¹⁵。
- 無保護（0%）——2001年1月にすべての鉄鋼関税と非関税障壁は撤廃される。
- 永続的な高保護——下流部門の製品には30%関税、他の製品には上流に行くにしたがってより低い関税が課される（現在無関税の製品は、国内生産が始まった時点で関税が課される）。
- 永続的な中保護——上と同じ、ただし最高関税率が15%。
- 一時的な中保護——上と同じ、ただし2012-16年にかけて関税率は0-5%に下げられる。

各関税シナリオに対応する経常利潤を図19に掲げる。当然ながら、高保護であるほど鉄鋼業にとっては利潤が多い。だがこの結果を評価する際には2つの追加的考察が必要である。第一に、AFTAおよび（将来の）WTOへの国際コミットメントを考えると、高位であれ中位であれ、ベトナムがAFTA以上の関税を鉄鋼業に対して永続的に維持することは、主要貿易相手国との外交的・経済的関係を犠牲にすることなしには許されそうにない。第二に、高いあるいは永続的な保護は国内の鉄鋼使用産業に打撃を与えることになる。国民経済全体の観点からすると、鉄鋼業を過度に保護することは必ずしも最適ではない（この点は将来より厳密に分析されねばならない）。

以上の理由から、鉄鋼の永続的保護は許されないし、また望ましくもないといえよう。この状況下では、ベトナム鉄鋼業にとって現実的な関税オプションは、第1の「AFTA遵守」か第4の「一時的な中保護」しかありえない。このいずれを採用するにせよ、その効果は2016年以降は同じになるが、その時点に至るまでは「一時的な中保護」は国内鉄鋼業にAFTA以上の余裕（セイフティ・マージン）を与えてくれる。この余裕の幅はグラフから読み取ることができる。それはあまり大きいものとはいえないが、そのおかげでVSCは赤字を一度も計上せずに済む。ベトナム鉄鋼業は、これ以上の永続的保護を求めるべきではないだろう。すべての将来投資

¹⁵ われわれの予測では、関税率はASEANだけでなくすべての国からの輸入に適用されると仮定する。

は、原則として自由貿易を想定して実施されなければならない。

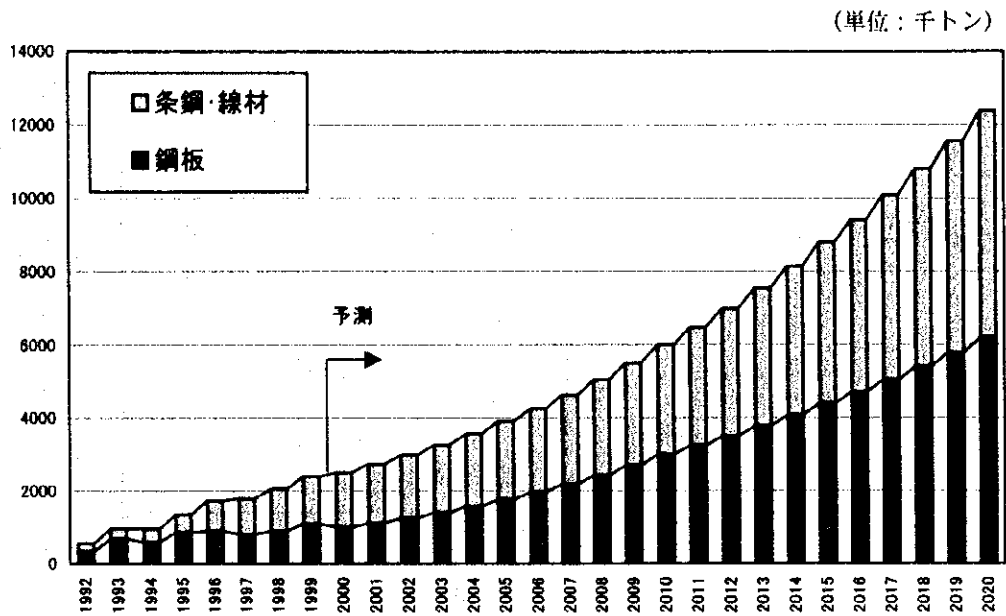
ただしこのことは、国内産業が予期されない外的要因によって突如深刻な打撃を被った際に、一時的なセーフガードや反ダンピング措置で防衛することまでは否定しない。そのような被害をもたらす原因としては、地域的な通貨危機やC I Sに属する国からの激しい安売り攻勢などが考えられる。外国企業がダンピング、輸出補助金といった不公正な行動をとっていると認められる場合には、ヴィエトナム政府はA F T A・W T Oの制約の中で適切な保護措置をとるべきである。そのような事態に対する具体的措置の提案については、別途論じられなければならない。

6. おわりに

本稿は、代替的なシナリオを想定した上で、一貫製鉄所を含む鉄鋼投資のパフォーマンスをグラフ化して表現した。われわれのベースライン予測は固定的なものでも最終的なものでもないが、異なる政策や対外条件が相対的にどの程度の影響を及ぼすかを知ることが、政策決定にとって有用なインプットになると信ずる。ここでは2点を指摘して結語としたい。

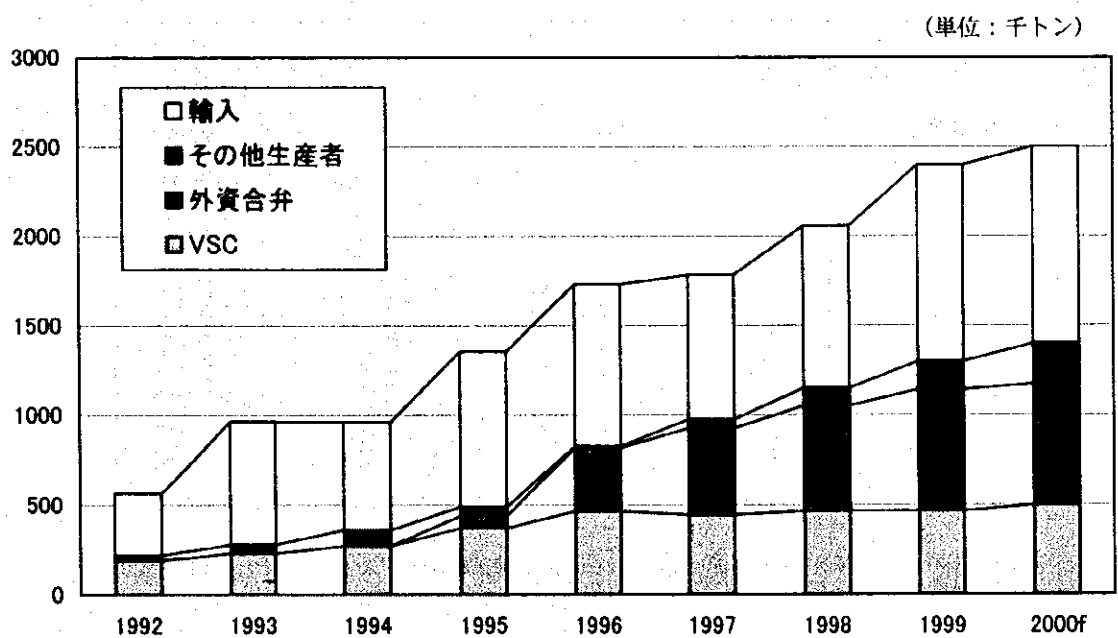
第一に、われわれの予測モデルは数量化可能なリスクを評価したが、数量化できない重要なリスクも存在する。その中で最も深刻なものは、判断ミスあるいは政治的圧力に起因する政策上の失敗である。公共政策においては経済的効率と社会的配慮（雇用確保、所得分配、地域間格差是正など）がともに関心事であり、両者が対立するときにはその適切なバランスが保たれなければならない。しかしながら国際統合が進行すると、非効率企業の存続が許されなくなり、経済的効率・社会的配慮間のトレードオフで重点が前者にシフトするという意味において、貿易産業政策に大きな制約が課せられることになる。いまや経済的効率を度外視した社会的目標の追求は、国民経済に激しい資源的犠牲を強いることになるだろう。ゆえに政策担当者は、技術的整合性や競争力を損なうような決定を下すことがもはや許されなくなる。国内原料の利用可能性、新工場のタイミングや場所、技術選択といった問題も、そうした観点から慎重に検討されなければならない。

第二に、鉄鋼業だけを研究するのでは十分でない。優先産業の選定は、国民経済全体の視角からより広く行われなければならない。各産業は限られた人的資源と資金を求めて互いに競争しているものであり、大規模な鉄鋼投資は同様あるいはそれ以上に高い収益性を有する他産業の投資資金を枯渇させてしまうかもしれない。政府は、諸産業が希求する公的資金・民間資金を適切に配分するための実的なメカニズムを工夫しなければならない。抽象理論や複雑なエコノメトリック・モデルは一般的な結論を導くことはできるが、現実の具体的な意思決定においてそれほど役立つものではない。ひとつの可能性としては、鉄鋼のみならず、すべての候補産業について詳細な調査を順次実施した上で、各産業の支持者を集めて代替的な投資戦略のメリット、デメリットを討論する場を設置することである。そこで政府は審査員の役割を果たせばよい。もしそのような議論の場が存在すれば、各産業の関係者にはより深い分析、より現実的な振興計画を提示しつづけるインセンティブが働くことであろう。



出所：JICA専門家およびJICAのF/Sチームによる2000年5月現在の予測。

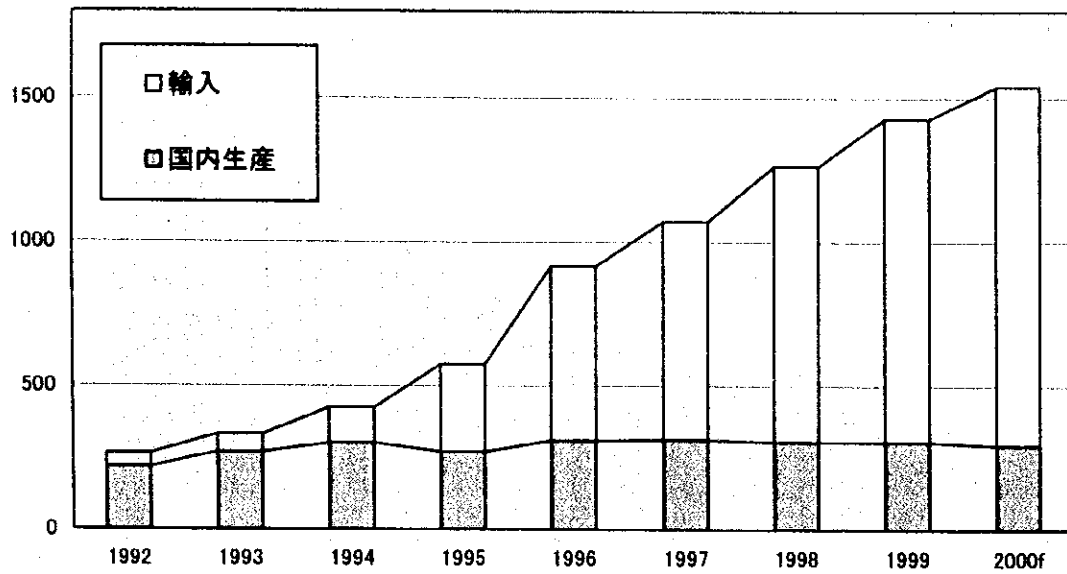
図1 鉄鋼内需予測



出所：V.S.C.

図2 最終製品の生産と輸入

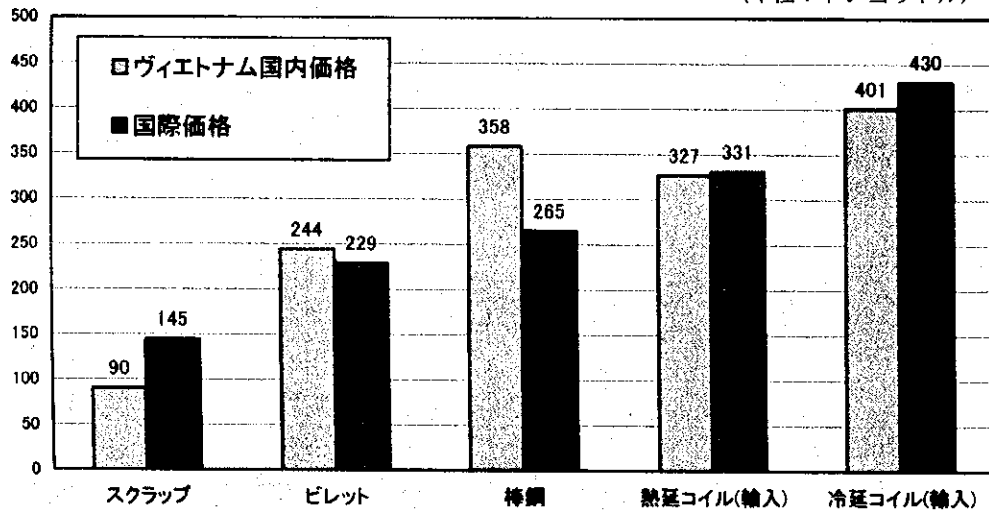
(単位：千トン)



出所：V.S.C.

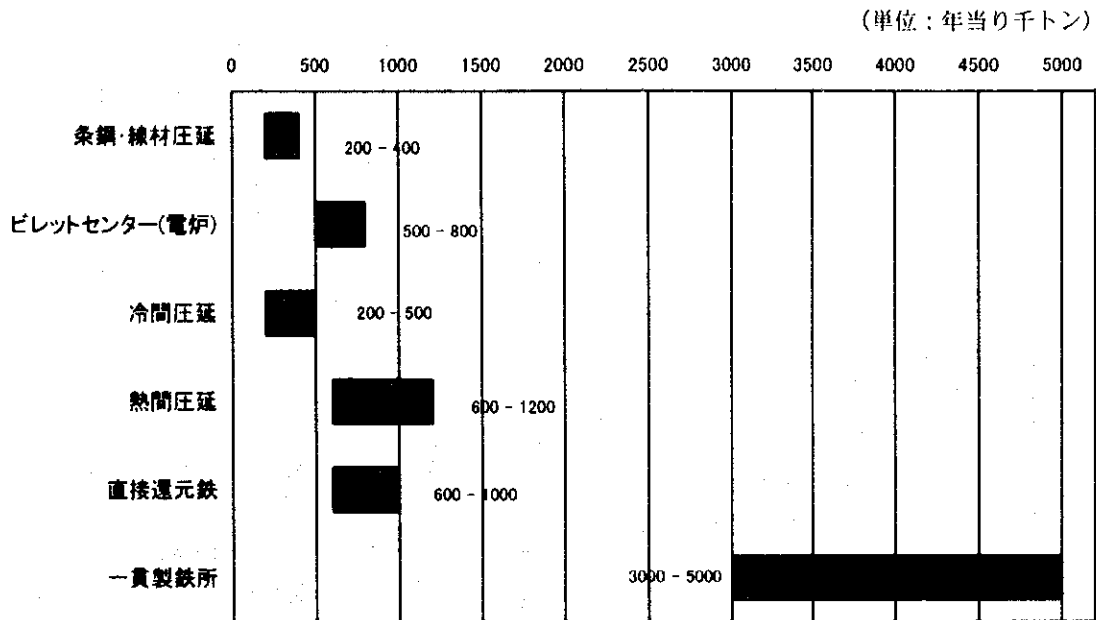
図3 ビレットの生産と輸入

(単位：トン当たりドル)



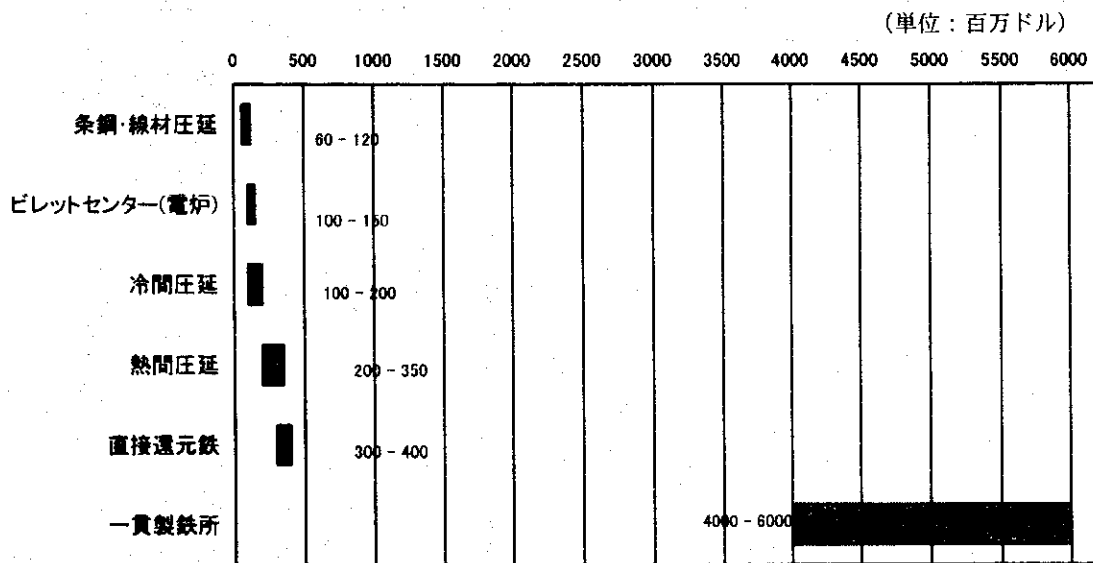
出所：国内価格はV.S.C.、国際価格は韓国通関統計から採取した韓国輸入価格(スクラップとビレット)、韓国輸出価格(棒鋼、熱延コイル、厚さ0.5-1.0mmの冷延コイル)を用いた。

図4 価格比較：1994-99年平均



出所：JICA専門家とF/Sチームの情報およびヴェトナムの現状に基づく著者の推定。

図5 中規模ミルの適正生産能力



出所：JICA専門家とF/Sチームの情報およびヴェトナムの現状に基づく著者の推定。

図6 初期投資

(単位：年当り投資額百万ドル)

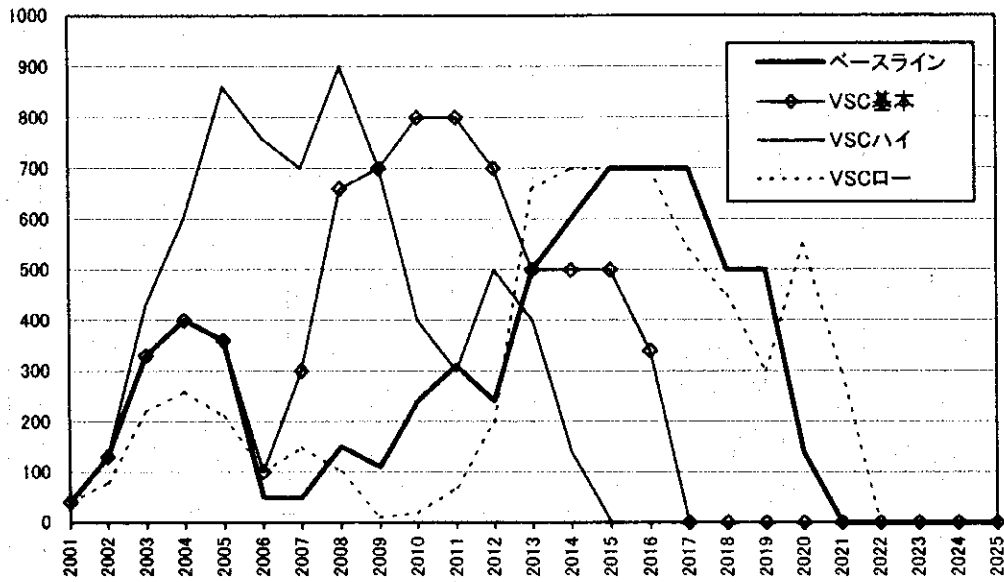


図7 代替的な投資計画

(単位：百万ドル)

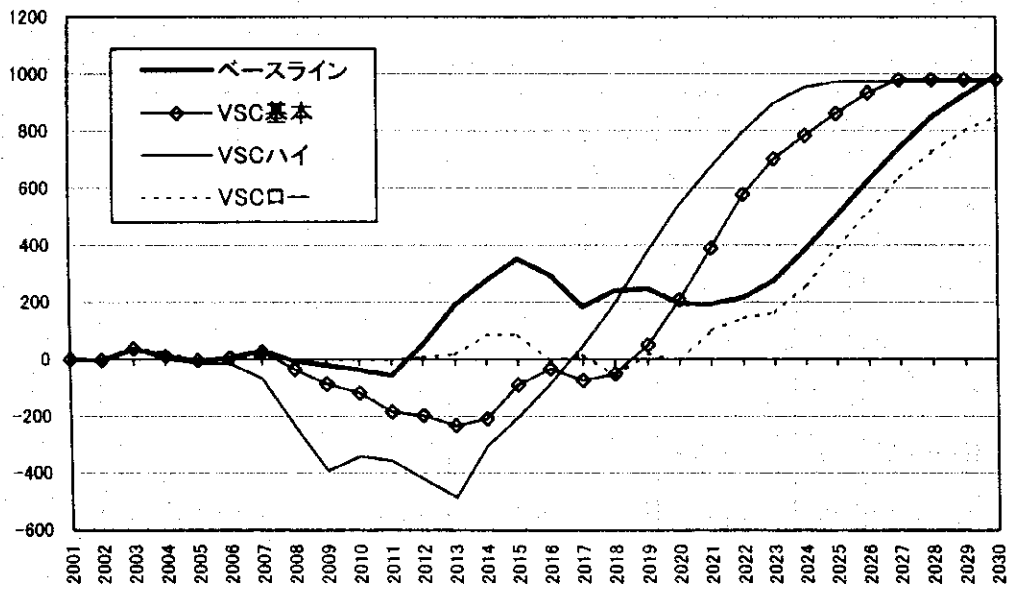


図8 経常利潤

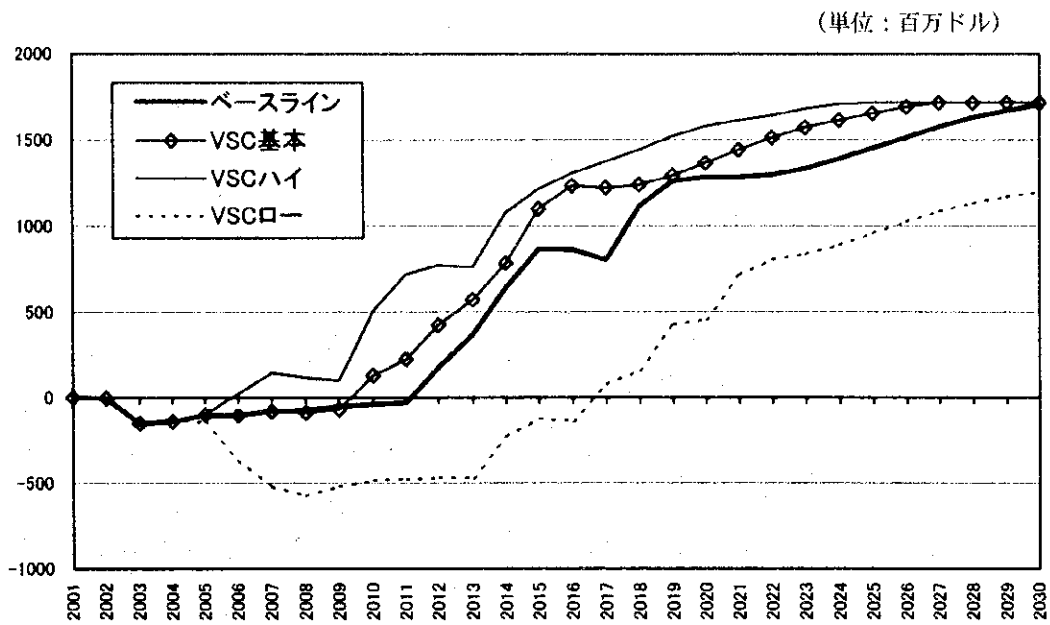


図9 国際收支インパクト

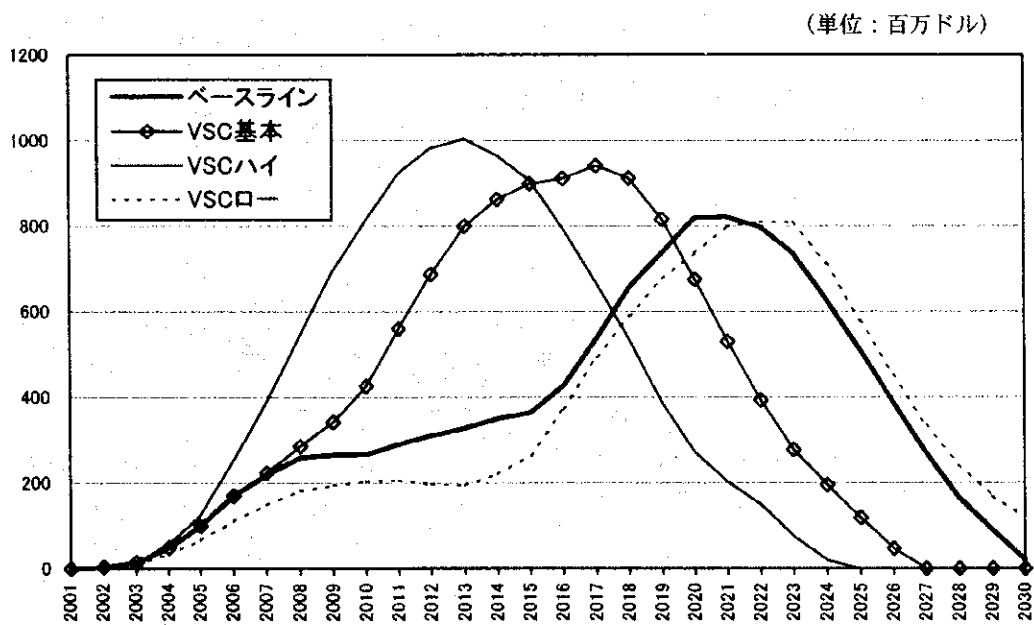


図10 債務返済

(単位：百万ドル、短期・長期、国内・外国をすべて含む)

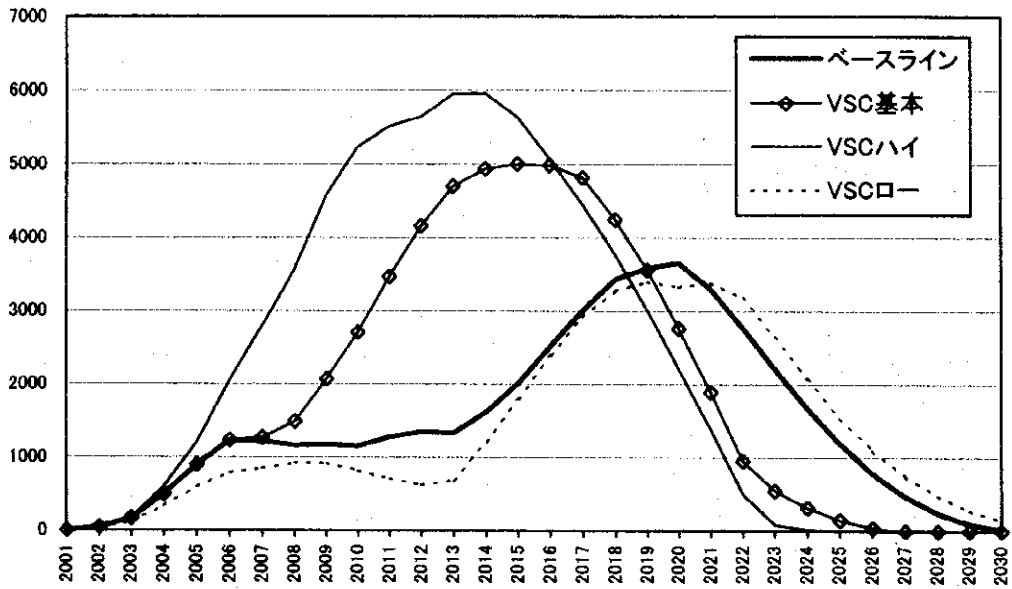


図11 債務残高

(単位：百万ドル)

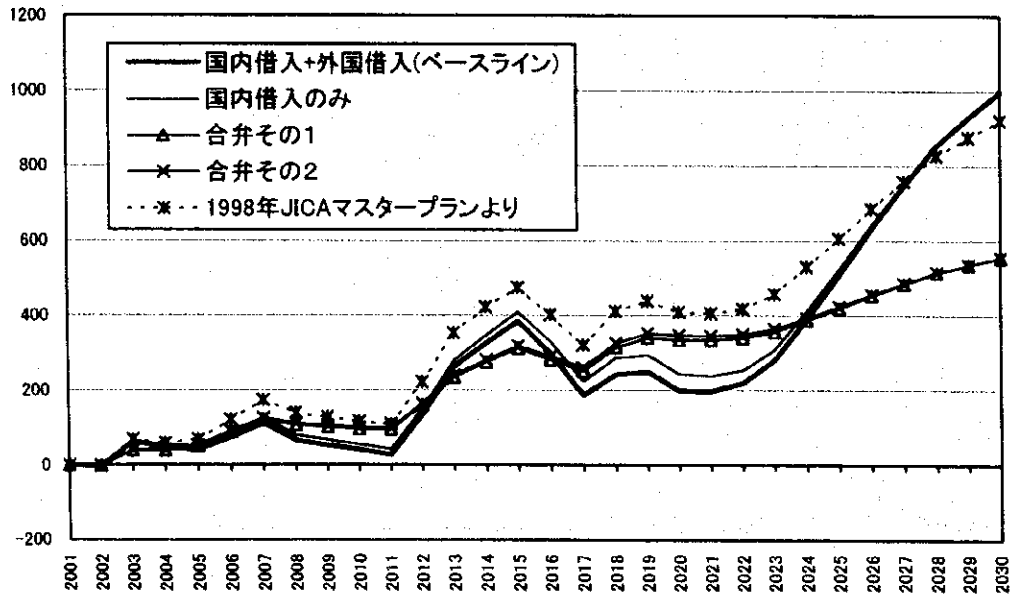


図12 経常利潤

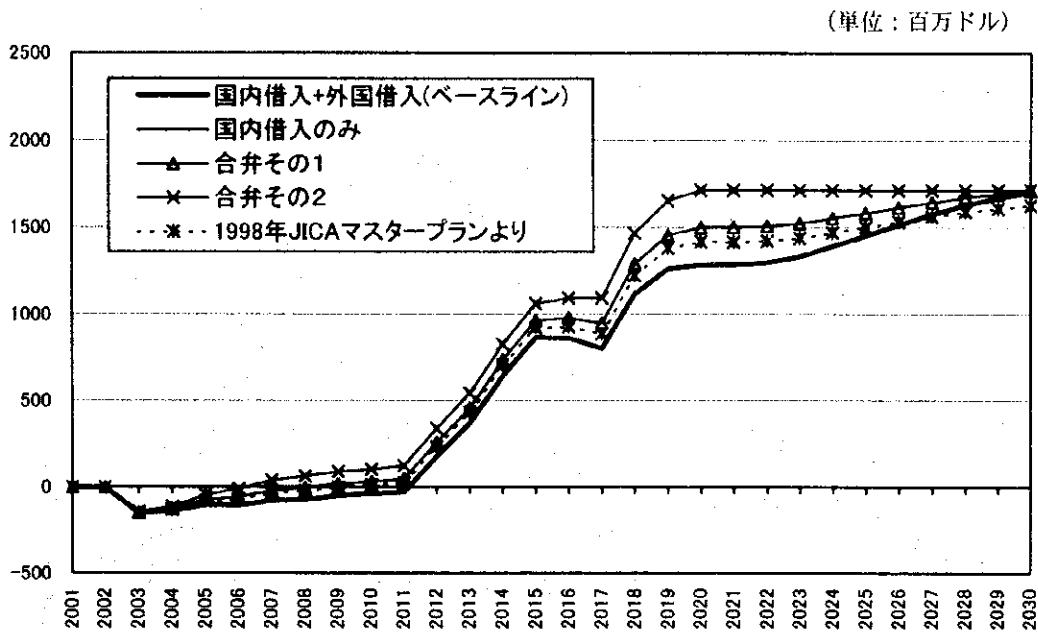


図13 国際収支インパクト

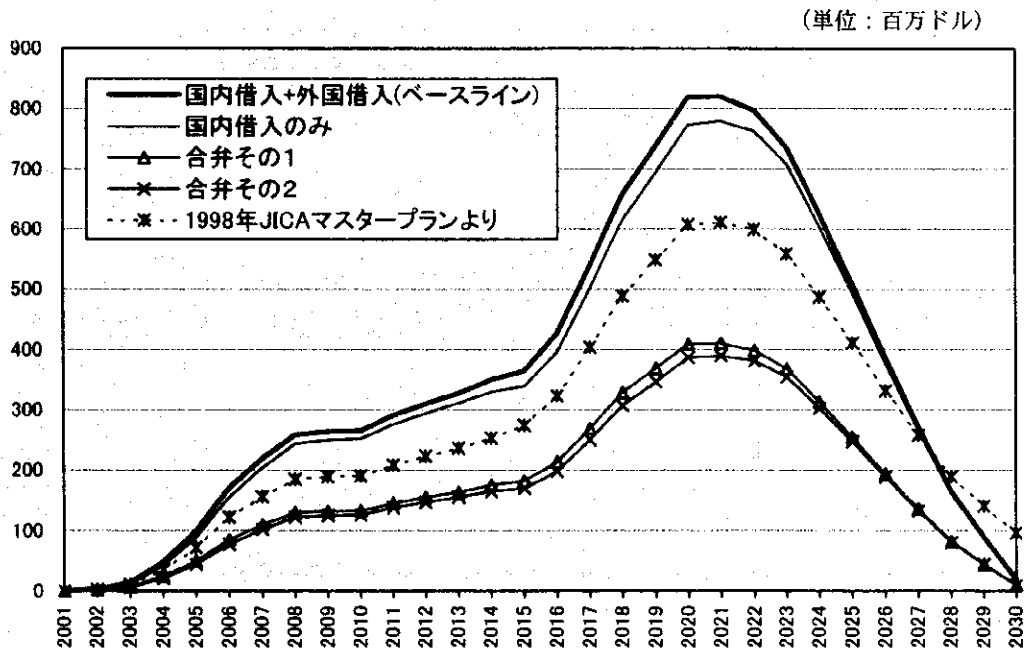


図14 債務返済

(単位：百万ドル、短期・長期、国内・外国をすべて含む)

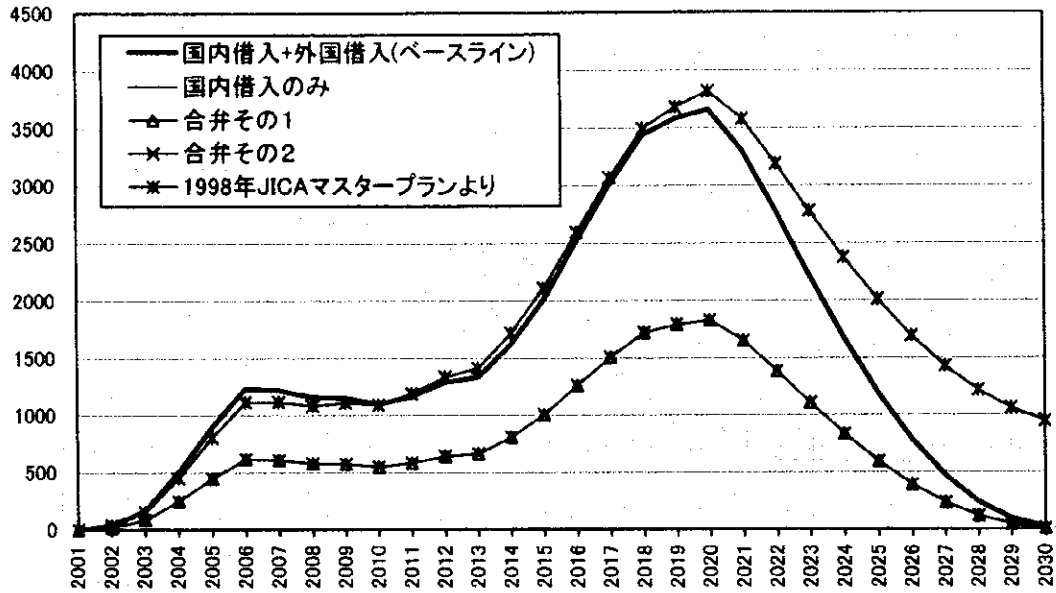


図15 債務残高

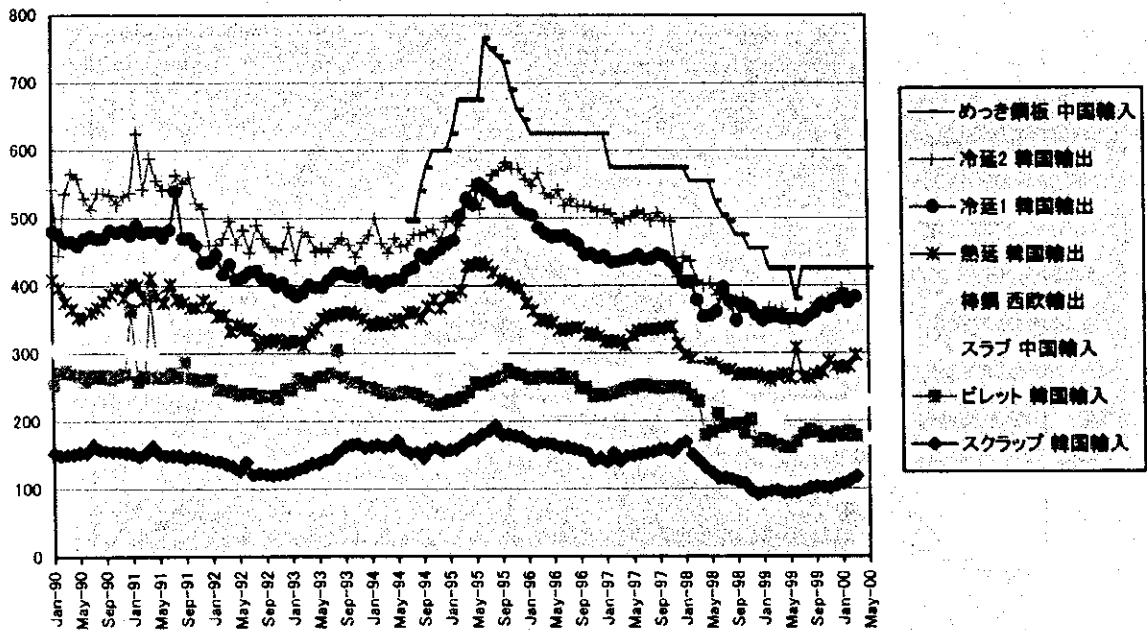


図16 国際価格変動(実際)

(単位：百万ドル)

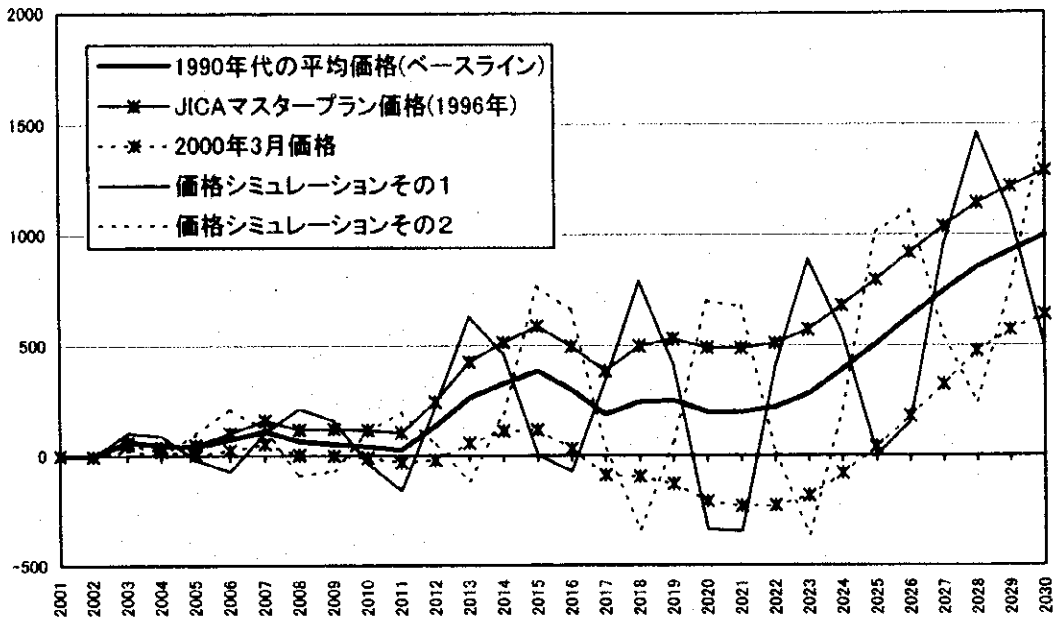


図17 経常利潤

(単位：百万ドル)

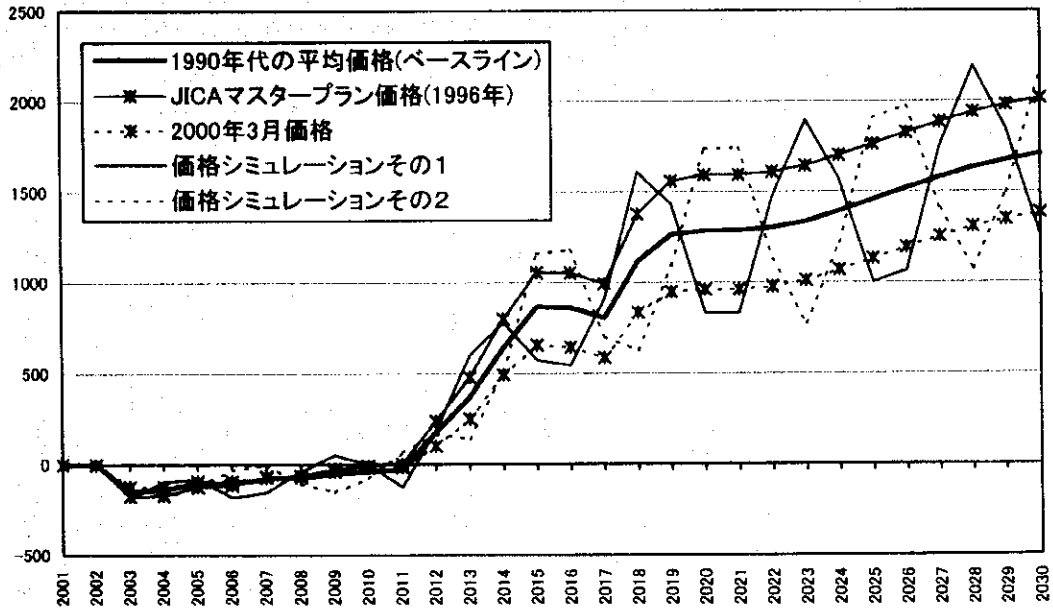


図18 国際收支インパクト

(単位：百万ドル)

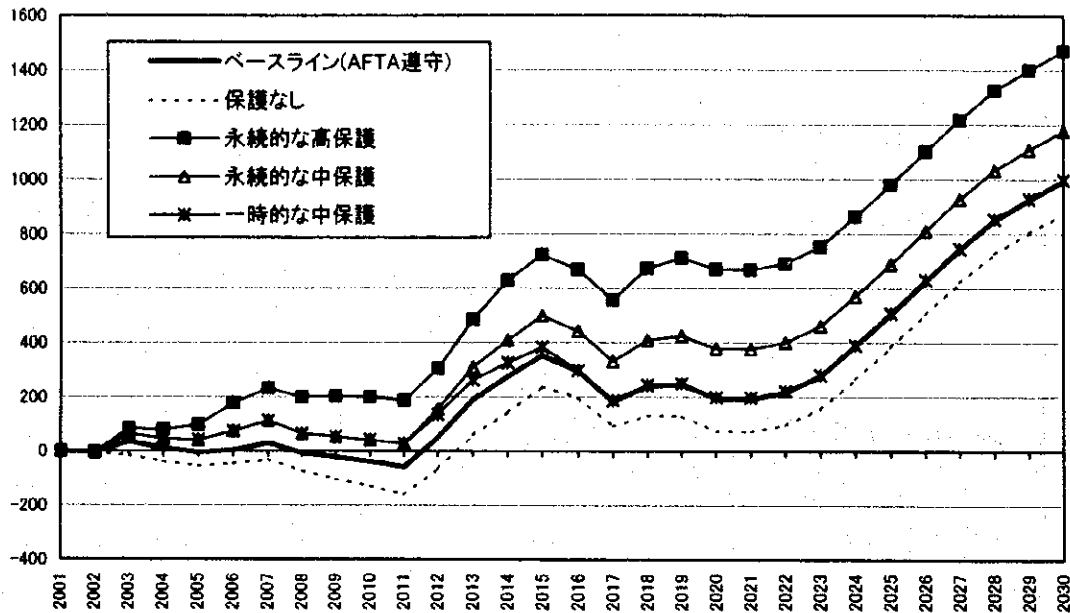


図19 経常利潤

表1 代替的な資金調達オプション

	<第1案> 国内借入と 外国借入	<第2案> 国内借入 のみ	<第3案> 合併その1	<第4案> 合併その2	<第5案> JICA マスタ ープラン
全資金調達に占める比率					
自己資金	0%	0%	5%	5%	10%
外資パートナー	0%	0%	45%	45%	0%
国内借入	50%	100%	25%	50%	40%
外国商業借入	50%	0%	25%	0%	30%
外国譲許的借入	0%	0%	0%	0%	20%
金利					
国内借入	7.5%	7.5%	7.5%	7.5%	7.5%
外国商業借入	10.0%	...	10.0%	...	10.0%
外国譲許的借入	...	...	...	...	1.8%
満期 (M) と猶予期間 (G)					
国内借入	M10/G2	M10/G2	M10/G2	M10/G2	M10/G2
外国商業借入	M10/G2	...	M10/G2	...	M10/G2
外国譲許的借入	...	...	...	...	M25/G10

外資の利潤取り分 45%

表2 関税シナリオ (%)

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	---
ベースライン (AFTA遵守)																						
めっき鋼板	徐々にAFTA上限5%へ低下	30.0	25.0	20.0	15.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
冷延鋼板	2003年に15%へ上げ、以後低下	0.0	0.0	15.0	10.0	7.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
熱延鋼板	2005年に5%へ上げ	0.0	0.0	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
糸鋼・線材	徐々にAFTA上限5%へ低下	30.0	25.0	20.0	15.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
ビレット	3%に維持	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
スラブ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
鉄鉱石	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
石炭	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スクラップ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
保護なし																						
めっき鋼板	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
冷延鋼板	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
熱延鋼板	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
糸鋼・線材	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ビレット	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スラブ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
鉄鉱石	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
石炭	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スクラップ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
永続的に高保護																						
めっき鋼板	30%に維持	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
冷延鋼板	2003年に25%へ上げ	0.0	0.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
熱延鋼板	2003年に20%へ上げ	0.0	0.0	0.0	0.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
糸鋼・線材	40%に維持	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
ビレット	2016年に10%へ上げ	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
スラブ	2016年に10%へ上げ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
鉄鉱石	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
石炭	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スクラップ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
永続的に中保護																						
めっき鋼板	徐々に15%へ低下	30.0	27.0	24.0	21.0	18.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
冷延鋼板	2003年に20%へ上げ、以後低下	0.0	0.0	20.0	17.5	15.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
熱延鋼板	2005年に10%へ上げ	0.0	0.0	0.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
糸鋼・線材	徐々に20%へ低下	40.0	36.0	32.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
ビレット	2016年に5%へ上げ	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
スラブ	2016年に5%へ上げ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
鉄鉱石	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
石炭	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スクラップ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
一時的に中保護																						
上記と同じだが、将来以下のようにする																						
めっき鋼板	のちに5%へ低下	30.0	27.0	24.0	21.0	18.0	15.0	15.0	15.0	15.0	15.0	13.0	11.0	9.0	7.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
冷延鋼板	のちに6%へ低下	0.0	0.0	20.0	17.5	15.0	12.5	12.5	12.5	12.5	12.5	11.0	9.5	8.0	6.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0
熱延鋼板	のちに7%へ低下	0.0	0.0	0.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.0	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
糸鋼・線材	のちに8%へ低下	40.0	36.0	32.0	28.0	24.0	20.0	20.0	20.0	20.0	20.0	17.0	14.0	11.0	8.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
ビレット	上記と同じ	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
スラブ	上記と同じ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
鉄鉱石	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
石炭	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
スクラップ	無関税	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Some Issues on the Development of the Viet Nam Steel Industry in the 2001-2010 Period

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1. Introduction

This paper is to discuss some issues relating to the general development of Viet Nam industry, including the steel industry. From the macro perspective, the goal of this paper is to come up with some stand-points and concepts in connection with the development of the steel industry in the period up to 2010, towards an industry with strong and effective steel industry, ensuring the efficient exploitation of potential natural, human and other resources throughout the country.

2. Industrialisation, modernisation and international economic integration

1. Industrialisation, modernisation

The 8th VCP national congress stated that by 2020 Viet Nam will basically become an industrial country with the development level generally outlined as the following: Though the GDP per capita not so high but by that time the production force is quite advanced, industry and services account for a high proportion in GDP and social labour; science and technology are able to catch and apply the most up-to-date achievements of the world. As far as the production relation is concerned, the ownership, management mechanism and distribution scheme blended, creating a strong incentive to promote economic growth, realising social justice. The State economy performed the dominant role and together with the co-operative economy has become the pillar-stone of the economy; private economy, small entrepreneurs and private capitalists accounted for a significant proportion; state capitalists with different forms have been popular. People have been better-off, having quite comfortable houses and favourable conditions for travelling, schooling and health-care. They have been exposed quite highly to cultural services, having healthy social relations, civilised lifestyle and happy families.

Following the completion basically of the first 10 year strategy (1991-2000), bringing our country out of crisis and preparing re-conditions for industrialisation, modernisation, the next 10 year's strategy will be the one of strengthening industrialisation, modernisation, creating the foundation for an industrial country in the following period. The next 10 year strategy should be oriented towards developing our

country rapidly and sustainably, building a sovereign economy, actively and effectively integrating into the world economy and continuing the renewal process more widely and profoundly.

Stemming from this target, in the next 10 years, the industrialisation and modernisation will be carried out under the following fundamental directions;

- (a) Developing industry and improving the technological ability throughout the national economy are the central task through the period of national industrialisation and modernisation.
- (b) Building economic and social infrastructure to meet the demand of the new development period and taking preparatory steps for the next period.
- (c) Shifting economic structure in the direction of ensuring socio-economic efficiency, and raising the sovereignty of the economy, on the basis of enhanced technological ability, healthy macro economy, creating and bringing into play comparative advantages to produce competitive goods and services, to meet domestic purchasing power and promote exports and continuously improve international trade and settlement balance.
- (d) Industrialisation and modernisation of agriculture and rural areas are a priority in the coming decade, creating a new change in the economic structure, labour structure and life quality in rural areas.
- (e) Industrialisation has been closely linked with modernisation since the beginning and through the development stages, building a new industrialised country with appropriate technological structure and elements inherent in the post-industrial society.
- (f) Bringing into play human knowledge through developing science, technology and training and education to improve the technological capability in every field of activity, overcoming the lag-behind and creating an advantage for the immediate and long term development.
- (g) Development investment by the resources from the State and all the society and at the same time making use of external resources.
- (h) Concentrating on medium and small projects.

2. Macro environment for the development of Viet Nam industry

In the coming period, Viet Nam industry will develop in a fast changing international environment both economically and politically. Two major trends affecting the social economic development of the countries world-wide should be considered.

Scientific-technical progress. Today, the world economy is facing a new era of development - the era of development towards a knowledge economy and an information society. This new trend has placed many nations in a position facing the demands for accelerating the scientific and technological development, improving national scientific and technological potential. The scientific and technological development will be the decisive factor for the competitiveness and position of a nation in the world.

The scientific and technological progress world-wide has been and is oriented towards using much more effectively material resources, combined with the discovery of new material and technology.

The process of industrialisation and modernisation in Viet Nam is not an exception. The target of gradually catching up with the international development level requires us to integrate effectively, grasping and going straight into modern technology, in which new material technology should be considered a spearhead and key priority.

Globalisation and economic integration. Globalisation and economic integration is presently a major trend, bringing about numerous opportunities as well as challenges to the nations, especially the developing and slowly developed ones.

Viet Nam has joined AFTA and undertaken to carry out the Common Effective Program for Preferential Tariffs (CEPT) to reduce the tariff rates to under 5% by 2006. Quantitative restrictions and non-tariff barriers on products under CEPT will be removed. For raw agricultural products belonging to the sensitive list, the restrictions and non-tariff barriers will be gradually removed through 2013.

Viet Nam is also negotiating to join WTO, APEC, etc. and has signed the US-Viet Nam trade agreement. The main principle of WTO is the orientation towards:

- Clarifying and making public all policies in connection with trade;
- No discrimination between its members in every commercial activity in connection with goods;
- No discrimination between domestic and foreign goods;
- Adopting tariffs the sole domestic production protection tool and every country should have a binding schedule for tariffs reduction; all non-tariff barriers should be removed; all non-tariff barriers necessary for protecting national security, health care or environment may be maintained but should be made public and should not be applied in the way of creating the protection barriers for domestic production.
- Encouraging fair competition.

Technology plays an important role in improving the potential productivity of production elements. Consequently, it is considered the factor mostly influencing the international competitiveness and so the development growth. Rapid technological change is the strategy of many countries, aimed at boosting the competitiveness in the process of integration into the international market. In several industries, comparative advantages of developing countries based on cheap labour resources have gradually lost their significance and even disappeared due to the process of introducing new technology and the process of automation from developed and newly developed countries.

The international circumstances have placed Viet Nam in a position facing great challenges but created opportunities for accessing the international markets (in broad sense) and civilisations world-wide.

As to industry in particular, this context demands careful study for choosing a proper direction, aimed at catching opportunities and minimising risks to boost the development of the industry and the

development of the national economy in general. Despite having the schedule for tariffs reduction under commitments to AFTA, the preparation of the units are still slow and the businesses, especially the State-owned businesses, are still waiting for the protection of the State. For the time being, Viet Nam still has to carry out a situation strategy in protecting the products which can be produced domestically, adjust steps in the process of trade liberalisation but not contrary to the commitments to AFTA and prepare to join WTO. The Government is also paying much attention to the policies and measures to encourage businesses to try their best in competition, not relying on the protection of the State.

There is also drastic change in the domestic environment. During the period of renovation, especially in the period Viet Nam carried out the 1991-2000 first socio-economic strategy, its economy has attained many achievements. Its economic potential has improved significantly: (i) to resolve basically the problem of food supply; (ii) to increase the ratio of internal accumulation up to 25% of GDP; (iii) quite rapid development of social and economic infrastructure; (iv) new economic mechanism has had drastic changes, facilitating the development investment throughout the economy and in the industrial businesses in particular. Legal framework for development investment activities have been improved significantly; macro-economic policies (basically) have brought about the stabilisation in economic development in general and the development of industry in particular, though the regional economic crisis took place in the 1997-1998 period.

The process of renovation has been and is being promoted to create a lot of opportunities for the development of industry in general and the steel industry in particular. In 2000, the Business Law has been promulgated and is being put into life; the Amended Foreign Investment Law has been promulgated, creating favourable conditions for the pooling of foreign investment; the administrative reform is being continuously promoted, facilitating economic activities.

3. Steel industry - development directions

1. The current situation of the steel industry - problems

The metal producing industry (including the steel industry) accounts for a small proportion in the industrial output: 3.3% in 1995; in 1999 this figure came down to 2.6%; it had the highest growth rate among industrial branches in the 1990-1995 period with the annual average growth of 27.8%. Then it plummeted in the 1996-1997 period and continued to increase with the annual growth rate of over 7%. The steel industry has attracted a small amount of industrial workforce (0.8% of the industrial workforce nation-wide). However, workforce in the steel industry requires high technical skills.

In the 1991-2000 ten-year period, the steel industry has achieved the following results:

- (1) The steel output soared in the 1991-1995 period (30% on average) and continued to increase in the following 1996-2000 period. Namely, the steel outputs of the years are presented below in Table 1.

Table 1 Steel output in the 1991-2000 period

		In 1,000 tonnes					
Year	1991	1995	1996	1997	1998	1999	2000
Output	149	450	900	1,050	1,150	1,300	1,400

Source: Viet Nam Steel Corporation.

The production capacity of the steel industry has increased significantly. The current production capacity and the steel output in 1999 are presented below in Table 2.

Table 2 Steel production and manufacturing capacity and the steel output in 1999.

Items	Current production capacity, 1,000 tonnes	Main products	1999 output, 1,000 tonnes
Crude steel	500	Billets	350
Long rolled steel	2,500	Round steel, bar, wire rod, small and medium section	1,300
Manufactured products after rolling	500	Welded tubes, plated toles of different kinds	190
Flat steel		Not produced yet	

Source: Viet Nam Steel Corporation.

- (2) Investment has been and is being made to transform, upgrade and provide additional equipment for Thai Nguyen Iron and Steel Corporation and Southern Steel Corporation to boost the steel production.
- (3) In 1996, Viet Nam Steel Corporation entered into a joint venture with foreign companies to invest in 12 projects, which have been or are being put into operation, including:
 - Construction round steel with a capacity of 850,000 tonnes (almost all the projects put into operation);
 - Welded tubes with a capacity of 45,000-50,000 tonnes (black steel, zinc plated);
 - Zinc-plated tole, colour-plated with a capacity of 100,000 tonnes per year;
 - Manufacture and processing of tole and wire steel.

In 1996, when a range of new production units appeared, the steel industry met the demand for such ordinary steel used in construction in Viet Nam as round smooth steel, flecked steel, wire steel, and roll steel. By 2000, with the above capacity, the steel industry will have met about 58% of the demand for steel.

This industry is expected to increase rapidly after 2000. It is an important industry, meeting the demand for raw material for the development of several other industries. In general, the achievements reached by the industry in recent years have been very encouraging. But looking at it more carefully we can see that the past years is only a transitional period, aimed at adapting step by step to the new mechanism and sound development. Despite the quite high growth rate achieved in the steel industry, it has not been fundamental. The real growth value of the steel industry has not been high due to the fact that we had to

import a large quantity of billets and hot rolled steel for further processing and manufacturing.

The investment for increasing new output has concentrated on the steel rolling and after-rolling manufacturing and processing and little has been invested in the refinery of pig-iron and steel or the raw material supply for the production. The products are mainly round smooth steel, flecked steel, wire steel, plated tole, welded tubes with ordinary quality used in construction. Different kinds of flat steel used in the building of ships, cars, oil warehouses, road bridges, railways; steel sheets , manufacturing steel, special steel, high quality steel must be completely imported. This has not only brought about the passiveness of the economy but also unable to meet the demand for the steel by the national defence when necessary. However, at present status quo, investment in the development of the raw material supply and the large-scale steel production are still facing a lot of difficulties (to be described in detail in the next section).

To meet the domestic demand for steel, annually we had to import a large quantity of steel. The amount imported in the 1991-1996 period is as follows:

Table 3 Steel import of Viet Nam in the 1991-1996 period

	In 1,000 tonnes					
Year	1991	1995	1996	1997	1998	1999
Import	113	1,100	1,549	1,320	1,735	2,266

Source: Ministry of Planning and Investment.

The development of the steel industry has been limited due to the following factors:

- The steel consumption market is still small: In 1996, 1.3 million tonnes of steel was sufficient to meet the steel demand of Viet Nam, used mainly in construction; after 1996, demand for steel increased but still limited (in 2000, the demand for steel is expected to be 2.5 million tonnes), the steel consuming industries started to seek their direction of development.
- Lack of investment capital: Investment for developing the steel industry requires large investment capital and the private and small businesses in Viet Nam presently are unable to invest. Though the steel industry deemed to be one of the prioritised industries, the State cannot invest much in it due to the lack of capital.
- The infrastructure for the development of the steel industry has not been uniformly developed.

2. The development policy environment of the steel industry

Being a basic industry and considered for many years one of the devilment focus of Viet Nam industry in the period of centrally planned economy, this industry has been given priority in the investment development.

In the context of current market mechanism, there are no longer previous priorities and protection

conditions, though there are still priorities to support the development of certain industries. The industrial policy environment has changed and the steel industry has also been affected by that overall change.

Then what is the current policy environment for the operation of the steel industry like? Here are some factors included in the policy environment for the steel industry.

2.1 Investment policy related to the steel industry

Borrowing capital for development investment

In the current period, the Government encourages industrial businesses in general to invest in development by their own capital and at the same time issues the policies for the businesses to have access to and able to borrow capital for development investment, except the cases where the Government directly carries out the investment with capital from the state budget.

Capital resources to be lent to businesses are: (i) domestic capital resources and (ii) external capital resources. With regards to domestic capital resources, businesses can borrow in two forms: preferential credit borrowing and commercial borrowing.

(i) Domestic borrowing:

The credit borrowing for development investment is carried out in accordance with regulations set in Decree No.43/1999/N§-CP by the Government, issued on 29/6/2000. The lending is to be adjusted in accordance with Decision No. 175/Q§-TTg by the Prime Minister, issued on 2/3/2000 and in which the lending interest rate was adjusted from 9% per year down to 7% per year.

State's preferential credit

The projects belonging to this borrowing resource are carried out in accordance with the annual investment plan for capital construction of the State. Presently, the Government is pondering the preferential lending interest rate for the steel industry.

Commercial borrowing

The commercial borrowing by businesses complies with the above mentioned procedures and is to be carried out by the commercial banks and the Investment and Development Bank.

(ii) Foreign borrowing

Businesses themselves can borrow capital straight from foreign resources or reborrow from the foreign borrowing resources of the Government or the State Bank in the way of self-responsibility, meaning: If you borrow, you will be responsible for paying back the debt.

Direct borrowing: Businesses borrow and pay directly foreign borrowings.

Reborrowing: Businesses borrow from domestic banks from State's capital resources or from the State Bank, borrowed from foreign resources.

The State Bank is a State regulatory body over foreign borrowings and payments by businesses belonging to all kinds of economic sectors, established and operating in accordance with the laws

of Viet Nam, including the foreign borrowings by businesses established and operating in accordance with the Viet Nam Foreign Investment Law.

The projects can reborrow from the state capital resources or from the State Bank in such a mechanism as in the preferential credit capital of the State.

In reality, it is very difficult to borrow domestic capital for development investment in the steel industry since the borrowing demand is very high (over tens of millions dollars), the banks have not enough money to lend at the current interest rate and the production efficiency of the industry is much lower than the world average. Moreover, borrowing procedures are still cumbersome, the processing of documents is slow, missing investment opportunities.

With regards to foreign capital resources, businesses find difficulties borrowing directly since the creditors still do not believe in the solvency of Vietnamese businesses. Consequently, in most cases, they have to borrow through the brokerage of foreign organisations. The procedures and mechanisms for foreign borrowings are also tight and complicated. The most difficult issue at present is the guarantee and re-guarantee. This is easy to understand as in the early stages of development, Vietnamese businesses are still not strong enough in the international markets.

Pooling foreign direct investment

Since 1986, the Government has tried to put forward several measures to pool foreign investment capital and attained significant achievements. The results could have been better if we had had a more rational and uniform system of measures to attract foreign investment capital.

In 2000, the Amended Foreign Investment Law was issued to provide more favourable conditions for attracting foreign investment capital into Viet Nam. However, foreign investment in the steel industry, especially in the upstream production segment is still facing scores of difficulties and not so attractive due to the specific features of the industry. Infrastructural conditions have not developed, so investment projects normally also have to incur such infrastructure development as the construction of roads, bridges, ducts, power and water supply. This is particularly burdensome for the investment projects in the steel industry. Many projects could not pool investment capital as the investment capital for the infrastructure is too high.

2.2 Tax policy and measures to protect domestic production

The tax policy for the steel industry is deemed to have highly protected domestic production. Import tax on raw materials for production is zero or insignificant and the steel products that can be produced domestically are in general imposed a quite high tax rate, up to 30-40%.

According to the latest decision, the Government has issued the list of goods and the tax rates of the commodity items under the Common Effective Program for Preferential Tariffs) of Viet Nam for the year of 2000 and the steel products made domestically mostly have a tax rate of around 40%.

According to many experts, the tax policy imposed on the domestic raw materials and products sold domestically is rational. However, there are no estimates of the impact of import tax rates on the items related to the operation of the steel industry.

On the whole, the State still maintains the protection policy for domestic production, consequently, domestic steel production units are still able to survive and develop in the context of competition of imported goods. However, in the context of gradual integration into the region and the world, the domestic steel production will still face a lot of disadvantages in the conditions of competition from imported goods. And the issue of protection should be considered seriously, aimed at finding solutions to improve the competitiveness of this industry in the market and preparing for the conditions of non-protection from the State.

3. The issues to be studied in the development of the steel industry

3.1 Does exist a strong enough steel industry?

The metal material industries are of special importance, providing basic input for other technical-economic industries, such as construction and mechanical industries and national defence and security. There is no developed industry without the development of such industry.

With such a nation having a population of 77 million as Viet Nam, in the future, when the economy is at a higher development stage, the development of the steel industry will surely play an important role.

At present, the direct contribution of the steel industry to the GNP actually is quite modest, about 1% of the total industrial value added output. However, the impact of the steel industry on other socio-economic activities is of great significance. The steel industry currently meets approximately 55-60% of the demand for steel consumption in the Vietnamese market for capital construction and manufacturing operation. According to recent forecasts, by 2010, the demand for steel consumption in Viet Nam will increase to about 6-7 million tonnes and in 2020 will rise up to 15 million tonnes—a scale, which is the pre-condition for the development of this industry.

An issue of special importance to be studied in the long term is the potential of natural resources for the development of the steel industry. Viet Nam has this potential.

The answer to a strong enough steel industry is much needed for the development of Viet Nam industry and Viet Nam economy. The cause of industrialisation and modernisation requires the development of the steel industry.

3.2 The issues in connection with the development of the steel industry

(1) The scale of the economy

Despite the drastic development in the past years, the economy of Viet Nam is currently of small

scale. The scale of the economy has a significant influence on the development of the industry: limited market, limited possibilities for capital accumulation for investment.

Due to the specific features of the industry, to ensure the efficient production, the production scale of metal material products should be large enough, whereas the demand for metal materials is diverse and fragmented, except the steel demand for capital construction.

(2) Product competition in domestic and international markets

It can be said that the market for metal (steel) material products is very big with the total trade value in steel of about USD 141 billion in 1996 (WTO annual report, 1997). However, according to the studies carried out by many experts, the steel output world-wide has been stabilised at the level of 800-900 million tonnes per year. This means there will be ferocious competition in the international steel market.

Also according to a WTO report in 1997, 10 leading countries in pig-iron and steel trade in 1996 accounted for 58.1% of the world total steel trade value, of which the two powers Germany and Japan accounted for 10.9% and 10.8% respectively. China has recently increased significantly the steel output with 2.6% of the world total steel trade value in 1996. The steel exporting powers have large output scales, the steel is diverse and of high-quality. They are strong competitors making the world price of steel go down. In recent years in particular, Russia has increased its steel output, affecting much the steel market.

We should pay much attention to the world market and the competition in the world steel market and it has a quite significant influence on the development of the domestic industry.

According to several studies, the domestic market will reach a scale of 6-7 million tonnes of steel of different kinds by 2010. However, this market consists mainly of ordinary construction steel. The demand for high quality steel for mechanical manufacturing is still low due to the weak development of the mechanical industry. Moreover, Viet Nam market is currently highly competitive due to the imported steel. Domestic production businesses hold only over 30% of the market.

All the above information shows that Viet Nam steel industry can only develop if there is a proper investment in the direction of ensuring efficiency and quality to have competitive strength in the market, both domestically and internationally.

(3) Resources for development

There are different assessments in connection with natural resources for the development of Viet Nam steel industry. The two main issues on the focus are: (i) iron ore and (ii) energy resources for steel refinery.

As to iron ore, the valuations are not uniform, especially those of its scale and quality and all these issues should be studied carefully. Moreover, one of the particularly important features—the valuation of the exploitation technical capabilities, the overall economic characteristics of the

exploitation, etc.—has not been clarified and uniformly assessed.

As to fuel and energy resources, Viet Nam has energy resources and is able to exploit enough quantity for the development of the national economy in the period up to 2010. However, according to recent studies on energy, without new energy resources or new technologies in its exploitation, processing and use, by 2010, Viet Nam will have to import a large quantity of energy. Moreover, some fuel resources for the industry of ferrous metallurgy coke coal is to be imported; rich coal is limited; valuable natural gas exploited has not met the demand by the metallurgy industry. Consequently, the seeking for a less energy consuming technology is a necessary move for the development of the non-ferrous metallurgy industry and in line with the policy of efficient exploitation and use of national energy resources.

It can be stated that domestic resources for the development of the non-ferrous metallurgy industry are an invaluable asset for the country and the problem here is how to exploit them efficiently? The point of time and the kind of technology to be used? Those are the questions to be solved.

(4) Technical-economic requirements

Investments in the material industry in general and in the metallurgy industry in particular are normally enormous and a feature of very importance is the low rate of return on investments. So, for this industry, investment decisions should be pondered carefully.

As to technology, with a long history of development, the world material industry has reached a high level and boasted scores of technological solutions. Each selected technology allows to create a category of products with certain quality and serves a certain market. Consequently, the technology selection has to pay special attention to the long term goal of development: to increase the competitiveness of products based on the advanced technology, high productivity and high quality.

At present, the domestic technological capability has achieved a certain level and the human resources of the industry are able to absorb and apply creatively the metallurgy technologies, which have been applied world-wide. But the question is how to apply these technologies in Viet Nam to achieve economic efficiency. Two issues to be put forward: (i) technological equipment: the key question here is that many kinds of technological equipment cannot be made domestically yet; (ii) from research to practical application: the production scale is a decisive factor in the technological efficiency, consequently the issue of applying research achievements into practice is very important and not clarified yet.

(5) Regional and international production division and co-operation

In the new circumstances of the world economy, the trend of integration and co-operation has become stronger than ever. As stated above, Viet Nam has officially joined and is carrying out its commitment to AFTA, APEC and preparing to join WTO. This process is leading to: (i) competition in production and sales right in the domestic market; (ii) creating favourable conditions to exploit

other markets; (iii) creating opportunities to take part in the division and co-operation in the region and world-wide.

So, the question put forward for the material industry is perhaps to identify clearly the product strategy with two major orientations: (i) to ensure the competitiveness and meet domestic demand to take initiative in the domestic material supply; (ii) to be able to enter the regional and international markets; to take part in international co-operation.

4. Orientations for the development of the steel industry

With above analyses in a very macro manner, the principal concepts to develop Viet Nam steel industry should be formulated as follows:

- (1) For a long period before reaching a high level of development, Viet Nam steel industry should develop basically in the *direction of import substitute*.

Despite this orientation, some issues should be pondered: (i) we should identify production capacity and conditions to improve production efficiency, increase competitiveness (technology, product quality, production organisation, costs, etc.) when Viet Nam its commitments to CEPT and then other commitments related to tariffs; (iii) steel products for the economic development include a lot of categories, so we should spell out the orientation of product strategy.

- (2) In the period from now to 2010, in addition to the development direction of import substitute, the steel industry should focus on the *target and direction* to improve its competitiveness for development and integration, aimed at being able to export after a period of time.

This dominant idea should be grasped thoroughly in the appropriate arrangement of targets and master planning solutions. The build-up of the national industrial potential, including the steel industry, should be placed in the conditions of meeting this requirement.

(3) Product orientations

It is obvious that at present, the supply of basic materials to the mechanical industry cannot be ensured by domestic resources. Supporting industries are less developed, limiting the development possibilities of the mechanical industry nation-wide and even foreign-invested mechanical production joint ventures as well. But the material demand for the mechanical industry is very diverse and its scale is still small. That is why for many years, Viet Nam mechanical industry in most businesses has created for itself a small scale capability of metallurgy and undermined the specialisation characteristic of mechanical production, leading to low efficiency, low quality of material and mechanical products have been less competitive. With this reason, in the immediate period, the mechanical industry should determine the development of the material industry for the mechanical industry: *to produce alloyed steel in a quite concentrated manner with medium and small scale, appropriate technology, aimed at improving production efficiency and quality, being able to compete right in the domestic market,*

creating pre-conditions for the development of larger scale in the coming period.

Another direction of development is the ordinary construction steel of high quality. This market is very big even domestically. With present domestic production capacity and up to 2010, the demand for this market cannot be met. However, the production of large scale based on the domestic resources in the first stage is an option which can hardly bring high efficiency and imposes high pressure on the economy from the perspective of investment. To solve this problem, the immediate target of the steel industry should be *oriented towards the downstream development—the last stage to create a lot of added value with small investment—and linked to the target of long-term development is to form a large scale steel production industry based on domestic resources when conditions are favourable (in respect of investment and technology in both the exploitation of natural resources and steel refinery, etc.)*

(4) Development mechanism

As described in Part I, the national development policy of our Party and State is oriented towards the rapid and sustainable development, solving well social issues. To do this, we should strengthen the process of renovation, building a socialist oriented market economy and putting all internal resources into play for development.

In this context, the steel industry should also be developed in an appropriate mechanism. The policies for the development of the steel industry should also be focused on mobilising the participation of economic sectors. However, to have an effective and sustainable participation, we should strengthen the standardisation and quality management, improve management by financial instruments and create an equitable environment among the sectors. This is an extremely important issue, ensuring the healthy development of the industry.

(5) Development stages of the steel industry

Steps:

- To focus on the medium and small scales in the period to 2005, even to 2010;
- To actively prepare conditions to be able to develop in large scale in the following periods towards a steel industry of high level of development, which can compete and meet a fundamental part of the demand for development of the national economy.

So,

- (a) For the time being, we should find a solution to restore the production of the Thai Nguyen Iron and Steel Corporation, based on the principle of ensuring socio-economic efficiency in the direction of management renovation, upgrade and renovation of technology to improve the competitiveness of products in the market.
- (b) To find solutions, choose appropriate scales for the development of Thai Nguyen's pig-iron and steel for the following periods, also on the mentioned principles.

- (c) To stabilise and facilitate the rearrangement of the material production for the mechanical industry with quite concentrated production scale, ensuring the characteristic of specialisation and economies of scale. This stabilisation can only be created on the basis of volunteer principle, through financial instruments, creating conditions for the efficient production.
- (d) Selected development of some steel rolling mills (downstream), taking into account the development potential of upstream businesses to meet immediate demand, create added value, increase accumulation, creating pre-conditions for the development of high level of the industry in the following periods.
- (e) The development investment should be fully assessed for investment projects on the basis of accounting correctly and fully all the costs, including the costs in connection with environment, opportunity costs, etc., aimed at assessing correctly the efficiency of investment projects.

General Framework for Restructuring Viet Nam's Steel Industry Policy under Integration Process

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Part 1: Analysis of Viet Nam's steel industry situation

1.1. Starting point of Viet Nam's steel industry: Steel production technology, investment situation and distribution of production units.

Up to 2000, there have been some investments in Viet Nam's steel industry, as a result, it has fairly modern tools for refining, rolling and after-rolling steel. However, the technology of the whole industry is still backward in comparison with that of the world industry (Table 1.1).

Table 1.1 Comparison of basic criteria of Vietnamese and the world - steel industry

1	Unit	Domestic	Joint - venture	In the world	Comparison (%)	
					7= 3/5	8=4/5
To refine steel						
Molten time	Minute	180		50	360.00	
Wasted steel (Scrap) consumption	Kg/ton	1250		1100	113.64	
Electric consumption	kWh/ton	900		350	257.14	
Electrode consumption	Kg/ton	8		2	400.00	
To mill steel						
Mill steel speed *	m/second	14	38	110	12.73	34.55
Blend steel consumption	ton/ton	1.11	1.05	1.03	107.77	101.94
Oil consumption	Kg/ton	65	48	25	260.00	192.00
Electric consumption *	kWh/ton	143	142	80	178.75	177.50

Referring to these criteria, it can be seen that domestic steel mills are working in backward technology condition. The time spent for melting is about 360% over the average rate of the world. Rates of scrap and power consumption are too high; especially the latter is 257.14% higher than that of the world. In rolling process, domestic mills show the speed of about 12.73% that of the world. Other consumption rates are higher. Particularly, the rates of power and oil consumption equal 260% and 178.75% of the world rate,

respectively. The bad condition of technology, apparently, will have negative impact on price, quality and competitiveness of Viet Nam's steel products in the future.

All equipment of Viet Nam's steel industry are distributed in three main areas as indicated in the table 1.2.

Table 1.2 Equipment distribution and mill network of Viet Nam's steel industry

Area and corporation	Capacity * (Ton/Year)	Place	Appliance (Whole area)
Viet Nam Steel Corporation	760,000		2 Small size balst - furnace 100m ³
Thai Nguyen Steel Company	240,000	Thai Nguyen	22 Small size electric arc furnace
Southern Steel Company	460,000	Bien Hoa	6-30t/batch
Danang Steel Company	40,000	Da Nang	4 Uninterrupted founded machine
Middle of Viet Nam	20,000	Da Nang	5 Semi - Uninterrupted laminated round steel rolling - mills
Metalware Company			7 mini handicraft rolling - mills
Joint venture	850,000		2 modern uninterrupted laminated round steel rolling - mills
Vinakyoei	240,000	BR-VT	
VSC-POSCO	200,000	Hai Phong	3 Semi - Uninterrupted laminated round steel rolling - mills
Vinausteel	180,000	Hai Phong	
Natsteel Vina	110,000	Thainguyen	2 small size mills produce welded
Tay Do Steel	120,000	Cantho	5 mills produce sheet iron zinc plated, Color plated and process to cut and bend steel plates, steel piece.
Other area	946,000		
About 22 production enterprises belong to local industry and non state sector, 250 in private sector (household)	3-20,000	To place in all local areas in the country	About hundreds of mini rolling mills and tens of steel process lines.

As being shown in the table, the industry possess many weakness in terms of technology and equipment. These weakness are displayed more clear in main points bellows.

Firstly, Thai Nguyen Iron and Steel Corporation, the oldest enterprise of the industry, was founded in 1963. The Corporation has three small EAFs with capacity of 100m³ per batch for each and some units producing flat steel. Currently, due to old condition, only one furnace is still working. Additionally, the backward facilities and limited skill of the workers brought losses to the corporation; products were unstable in the past years. Low productivity became a problem of the corporation, as compared to Japan's companies; the average output per worker of Thai Nguyen Iron and Steel Corporation is about 15 times less than that of Nippon Corporation. Nippon Corporation yearly produces 10 Mt with 5000-6000 workers, while Thai Nguyen with over 10,000 workers only produce 200-300 Kt per year. Therefore Thai Nguyen Corporation need to dismiss unskilled labor and non-profit units.

Broadly, Viet Nam's Steel Industry is not better than Thai Nguyen Iron and Steel Complex in terms of equipment and technology level (Figure 1.1). The survey data shown that third world technologies dominated

* Only account for rolling - mills

75% technology used in the industry and allocated in old factories in both the North and the South. Medium technologies accounted for 10% and lain in individual production lines. Advanced technology accounted only for 15%, and mostly utilized by joint ventures with South Korea and Japan such as Vinakyoei, VSC-POSCO.

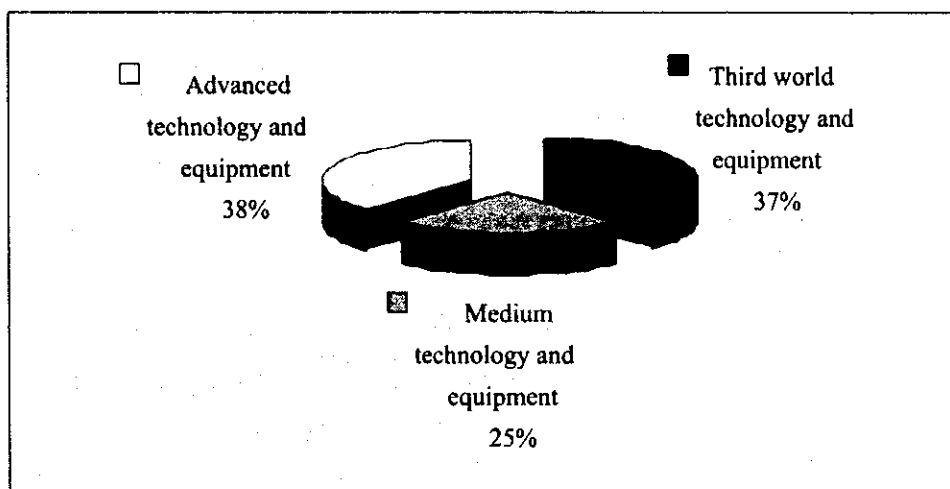


Figure 1.1 Equipment and technology level of Viet Nam's steel industry

Origins of equipment and technology are another evidence of third world (Figure 1.2). Chines and SNG's technologies and equipments accounted for 33 and 20 percent of total technologies and equipment used in the industry, respectively. These technologies and equipment were imported around 40 - 50 years ago and were backward by 3 - 4 technology generations. Technologies and equipment imported to the South before 1975 were very backward. Some advanced and medium technologies and equipment imported by join ventures were mainly allocated in downstream of the industry.

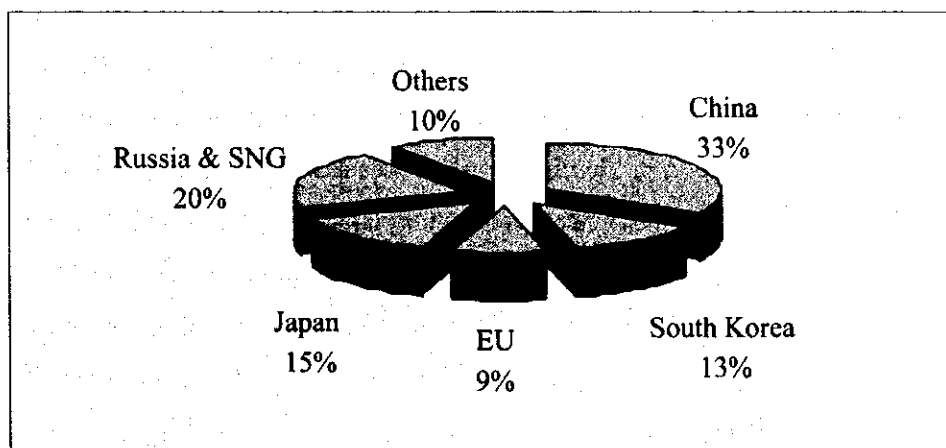


Figure 1.2 Origins of technologies and equipment of Viet Nam's steel industry.

Secondly, the production allocation and organization are not appropriate. Most of steel-making units were built long time ago, which were not planned to fulfill requirements of steel industry technology to get

combined linkage and easy transport. The corporation's producing units are also spreaded along the country basing on older units. While joint venture steel rolling mills are allocated properly, based on the distribution of material and input sources for rolling process and consumption. For example, three biggest joint venture steel rolling mills in Viet Nam all located in Baria—Vungtau and Haiphong near imported material and gas sources, however, in the long term, if the domestic material is created, this allocation will reveal its limitations. In local and non-state steel industry, enterprises are allocated very arbitrarily. This violates the general technique rules of steel production. To enhance efficiency of the industry, producing units for different stages must be concentrated and be implemented order of producing chain. It will be ineffective and less competitive if one enterprise make flat products in the North then they will be cooled and transported over a thousand km to other enterprise in the South for hot rolling.

Thirdly, investment in steel production is seriously unbalanced between capacity of billet production and steel rolling. Billet production capacity is very low, meeting only 25% demand for small square billet. Meanwhile, in recent years, increase in demand for billet throughout the country has been leading to imbalance of the industry.

Table 1.3 Production situation of Viet Nam's steel industry

Products	Designed capacity (ton/year)	Output 1998 (Ton)	Mobilized rate of capacity (%)
Crude steel (Blend steel and bar steel)	470,000	305,682	65
Rolled Steel (Round steel and contractual steel)	2,000,000	1,200,000	60
Blowpipe, sheet steel plated	500,000	120,000	24

The imbalance in capacity is explained by the imbalance in investment pattern. Investment in billet production has not been attracted due to requirement of huge capital, long time for production preparation and low rate of return. Other reason is that the value added of billet production is low, this does not attract foreign investors while local enterprises lack capital. Furthermore, importing billet is so it was not protected (tax rate is 3%). On the other hand, the demand for rolled products is high, mainly construction steel. In addition, the investment in rolling process does not require too much capital so not only central and local but also private enterprises can invest. Foreigners find their profit in this process so a lot of types of joint venture appear. Investors can benefit from a high protection barrier in local rolling construction iron and steel market (with a tax rate of 40%). All above reasons make the disequilibrium between billet refinery and production and steel rolling process.

Due to improper investment, Viet Nam annually still imports nearly 1 million ton billet for local bar steel production. In next 5-10 years, billet import still accounts a large share, however the local supply needs gradually to be increased. The project to expand Thai Nguyen Corporation's production capacity by building EAFs is feasible and can reduce billet import by a half (about 500,000 tones in 2005).

Fourthly, product lines are not abundant, it only includes long products (bar, wire rods for construction) and some sheet products (tinplate, welded pipe). There is no hot and cold rolling tools to make plate steel. Quality of product is low, except products of joint ventures. The imbalance in production raised problem for the industry in choosing proper products meeting market demand in the coming years.

Fifthly, on account of irrationality in organizing producing and importing billet, obstacle technology, low productivity, production cost of domestic hot and cold roll steel is very high, as a consequence domestic steel products have trouble in competing with imported steel products.

Production cost is lower in case of steel made from imported billet both in Thai Nguyen Iron and Steel Complex and South Iron and Steel Complex. This difference is due to lower price of imported billet in comparison with that of domestic billet. The result supports the idea of importing and putting away money to develop downstream facilities of the industry in period of next 5 - 10 years.

Table 1.4 Production cost of domestic roll steel

Unit: VND/ton

Catalogues	Thai Nguyen Steel		The South steel	
	Imported billet	Domestic materials	Imported billet	Domestic materials
Material cost	2969775	3031823	2832410	2989210
Fuel and energy	213031	213031	216099	216099
Depreciation	142151	142151	81548	81542
Salary	41516	41561	56720	56720
Medical and life insurance	8312	8312	2061	2061
Management cost	264930	264930	333023	333023
Exwork cost	3639761	3701809	3521862	3678662
Minimum selling price	3821749	3886900	3697955	3862595
Price of imported billet	2744000		2660000	
Price of domestic billet		2800000		2800000

Price of imported billet by Thai Nguyen Iron and Steel Complex is 3.01% higher than by South Iron and Steel Complex, as consequence, Thai Nguyen production cost is higher. So, Thai Nguyen Iron and Steel Complex need to examine reasons for and search for new sources of billet.

Analysis of production cost also reveal that domestic steel products were at competitive disadvantages position. Billet, main material accounting for huge proportion in production cost, produced by domestic producers has price not higher in comparison with that produced by producers in South East Asia region. Therefore, high production cost of steel made by producers in Viet Nam is due to higher rate of material consumption and lower productivity in comparison with producers in South East Asia region.

1.2 Viet Nam steels market: supply sources, price and protection mechanism.

In the past years, Viet Nam steel market suffered from a lot of fluctuations and imbalance between demand and supply in some kinds of products. In general, rolling products have not yet met the demand.

Table 1.5 Rolling steel production and consumption in Viet Nam market

Year	Output		Consumption		To meet demand (%)	Import		
	1,000 tons	% increase	1,000 tons	% increase		1,000 tons	% increase	% increase in importing
1991	149		350		-57.43	201	42.57	
1992	196	31.54	540	54.29	-63.70	344	36.30	71.14
1993	243	23.98	800	48.15	-69.63	557	30.38	61.92
1994	280	15.23	990	23.75	-71.72	710	28.28	27.47
1995	450	60.71	1100	11.11	-59.09	650	40.91	-8.45
1996	900	100.00	1400	27.27	-35.71	500	64.29	-23.08
1997	1050	16.67	1700	21.43	-38.24	650	61.76	30.00
1998	1150	9.52	1900	11.76	-39.47	750	60.53	15.38
1999	1270	10.43	2090	10.00	-39.23	820	60.77	9.33
2000	1400	10.24	2300	10.05	-39.13	900	60.87	9.76
Average		27.83		21.78	-51.33		48.66	19.35

The Table 1.4 shows that the rolling steel production of Viet Nam during 1990s has increased significantly in absolute term, the annual growth is 27.83% on average. In which, the level of 1996 is the highest owing to new production of some joint ventures such as Vinakyoei, VPS, Vinausteel and Natsteel Vina invested in 1995 and late 1996. Production output rose, but did not meet the demand yet, although the consumption, on average, increased 21.78% yearly. As such, in general, in 1990s investment in rolling steel production is insufficient. The domestic supply met 51.33% demand. In order to solve this deficiency, in the past recent years, Viet Nam allowed importation of a large amount of rolling steel (accounting for 48.66%) with average import growth rate of 19.35% per year. This rate is higher than Viet Nam economy's average growth rate of material import during last ten years (16.78%). Therefore, in long term, rolling steel import for domestic consumption continues to make up a high proportion.

However, domestic production structure is not appropriate with consumption structure. Almost domestic steel output is bars and simple shapes serving for principle construction (more than 85%). For these reasons, Viet Nam's steel industry overproduced construction steel with low quality but underproduced shapes, plates, low carbon steel and high carbon steel that were inputs of machine-making, ship building, metal spare part industries. Improper product structure required steel business enterprises to seek market for construction steel not only in Viet Nam but also abroad. On the other hand, steel importation for other industries need to be carried out effectively. Hence, in the next few years Viet Nam's steel industry will have to make some changes in production investment structure.

The issue directly associated with domestic demand and supply of Viet Nam's steel industry is price competitiveness. Currently, supply of rolling steel products for construction exceeds demand, the consumption is facing difficulties because of high price. Domestically produced steel for construction is 10-15% higher than products imported at CIF price from Russia and SNG (25-28 USD per ton) and 5%

higher than products imported at CIF price from Japan, South Korea and Western countries (10-12 USD per ton). As such, price competitiveness is a disadvantage for construction steel production businesses. If in the coming time the price of Viet Nam's construction steel decrease by 10-15 USD per ton, the competitive pressure in local market will fall, this is appropriate with the way to step by step eliminate trade barriers according to the agreement signed with AFTA. If the price decrease by 20-25% USD per ton then our products will be able to have competitiveness in the world market. According to experts of VSC, this competitiveness is depended on low depreciation of some enterprises. Other factors can lead to reduction in price such as higher productivity, decrease in management cost and higher capacity of mills need longer time.

Due to complex fluctuation in domestic market, balance between supply and demand for products are not reached, barriers were created to protect domestic businesses to implement import substitute strategy for material production as well as ensure sufficient import of some kinds of steel as a vital input of some industries.

Non-tariff barrier was applied to bar steel for construction by stipulating import quota. This solution helped enterprises associated with VSC to produce rolling steel make profit and VSC became a profit business in 1998 and 1999. (Figure 1)

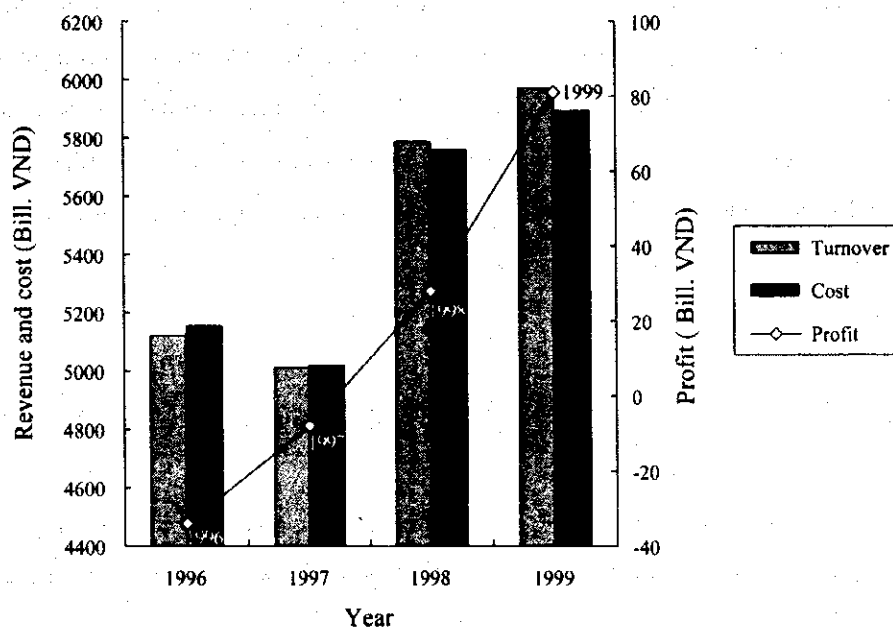


Figure 1.3 Turnover, cost and profit of VSC

Tariff tools are best used by imposing different tax rates based on purposes. Currently, tax rate on billet is 3% and on different non-alloy steels are from 0 to 40%. The import tax on bars and shapes is 40% (see appendix 2—Current Import Tax Table). Due to complex taxes we can use two criteria: average imported-steel weighed tariff and protection coefficient for steel domestically produced business.

Table 1. 6 Average tariff of imported iron and steel

Products	Amount (1000 tons)	Average Price (USD/ton)	Value (1000USD)	Tax rate (%)	Density Import	Tax (1000USD)
Long product	100	271.1	27110	35	0.04	9488.5
Cold rolled steel	375	435.1	163162.5	15	0.23	24474.38
Hot rolled steel	625	342.6	214125	15	0.30	32118.75
Blend steel	1245	243	302535	3	0.43	9076.05
Sum			706932.5			75157.68

As shown in table 1.6, the average tax on imported steel is 10.63%. Therefore, all rolling products have a tax rate higher than the average level and need to follow the way to reduce tariff according to CEPT in the years to come. This will put a fierce competitive pressure on Viet Nam's steel businesses against imported steel from ASEAN countries after the year 2006. However, The calculations above does not show an accurate protection level of steel product in Viet Nam market because steel billet has a low tax rate (3%) with a large import amount cause deviation in the result. Therefore, average weighed tax rate for three imported rolling products of 16.34% shows that the protection level for rolling producing enterprises is very high. In the future, to compete with imported rolling steel, tariff protection remains a necessary tool for existence of steel industry.

In current practice, almost rolling products were produced from imported billet with low tax rate, while tax on final product was high therefore protection coefficients applied to various rolling products are different. Using price in the world market as selling price and price of billet import as factor cost, we have protection level for long, cold rolling flat and hot rolling flat as follows: 274.7%, 12.18% and 26.16% respectively. Obviously, the protection coefficient for construction bar steel is very high as long as it was produced from imported billet. In fact, the selling price of long products by Viet Nam's enterprises is 10-15% higher than the world marker price so that the protection level is much higher. It implied that all rolling steel enterprises are existing and operating depending on protection barrier, if tax on output was cut down and that on tax on imported billet was maintained 93%), enterprises (including joint ventures) would suffer losses unless they reduced their production costs.

In brief, from situation analysis in technology, investment allocation and production structure aspects of Viet Nam's steel industry above as well as fluctuations in Viet Nam's steel market and impacts of protection we can draw some following conclusions:

- Viet Nam's steel industry is still in small scale with backward facilities, except some joint ventures. Protection technologies were not synchronized. Product structure was improper with low quality;
- The imbalance in production of billet and final products was serious, this required a long time to adjust and a huge investment capital;
- High production cost resulted from various reasons had increased price of final products, making Viet Nam's steel industry less competitive;

- Viet Nam's steel industry has not a master plan yet, it needs to be rearranged;
- The competitiveness of the industry is weak; most of its enterprises are operating under protection of trade barriers. They will be facing problems when Viet Nam implements CEPT of AFTA commitment.

Part 2: Policy selections for Viet Nam's steel industry

2.1 Alternatives for policy option for Viet Nam's steel industry

- + **Alternative 1:** Planning strategies and policies for the steel industry must be placed in general economy. According to us, in the next 10-20 years, Viet Nam's steel will not be a key industry of the country yet; it is not given priority to develop. From an agricultural country, where sufficiency still exists and small productions are popular, to carry out large scale and modern production we can not depend on heavy industries, can not start from steel industry. We made serious mistakes in 1960-1970s when invest too much in heavy industry. The thought "priority for heavy industry" developed in mineral exploitation, metallurgy, machinery industries... caused capital waste, inefficiency and prevented Viet Nam's economy from development. We cannot make these mistakes again.
- + **Alternative 2:** Regional and International integration is an indispensable trend that Viet Nam have to follow. Steel industry as well as others of Viet Nam's economy have to accept competition and stand steadily in competition not rely wholly on the state's protection. The impacts of participation in ASEAN free trade area and WTO on Viet Nam's economy need to be fully analyzed, however, we can see here the direct impact on three following subjects:
 - State's import and export tax revenue will be reduced;
 - Consumers will benefit from lower price and more abundant types of goods;
 - Enterprises have cope with competition. Competition may accelerate production and business but they will be put on the bank of bankruptcy.

Under regional and international integration process, Viet Nam's steel industry will face more challenges than advantages. According to documents we have, we can affirm that Viet Nam's steel industry has no advantage over other ASEAN countries, the competitiveness of Viet Nam's industry is very weak.

Theoretically, competitive advantages are formed by interaction of factors:

1. Available production conditions (labor, natural resource, geographical location, and natural conditions...
2. Conditions of domestic market;
3. Complementary and related industries;
4. Strategies, structure of enterprises and competition within the country;
5. Policies and regulations of government;

6. Random factors.

Out of six factors above first four factors are the most important. Analysis of conditions and situation of Viet Nam's steel industry under the integration into AFTA and furthermore WTO shows that Viet Nam's industry has no competitive advantage. This is indicated in following aspects.

- a. Mineral sources for steel industry are small as compared to that of ASEAN countries. For example, Viet Nam is 0.01; Thailand is 0.47; Philippines is 0.3 and Indonesia is 1.54.
- b. Workers of Viet Nam's steel industry are in large number but low quality. There are not enough experts and skillful workers. This pattern is common in Viet Nam's labor force. Based on Human Development Index (HDI) Viet Nam ranked 116th, while Philippines ranked 99th, Indonesia 105th, Thailand 54th, and Singapore 53rd. Low labor cost is merely production cost advantage. This advantage can only be undertaken by labor and material intensive products. With products required high technology there is no this advantage at all.
- c. Other ASEAN countries with more advanced technology will have stronger competitiveness than Viet Nam. Furthermore, other ASEAN countries and South Asia countries implemented export strategy sooner so that they can get an appropriate export structure in favor of deeply processed products. Viet Nam mainly exported raw materials ranging from natural minerals to agricultural products. Steel used industries of ASEAN countries such as Thailand, Singapore, Indonesia and Philippines... developed well, having products exported to many developed countries. In Viet Nam, steel used machinery industries developed slowly. Some well-developed machinery industries such as automobile, motorbike, ship building... belonged to joint venture or enterprises with 100% foreign capital. It will take a long time for Viet Nam to receive high technologies of strong machinery industries from foreigners. Therefore, it is difficult for Viet Nam's steel industry to penetrate domestic market. The industry is at a risk of losing its market in its own countries.
- d. As compared to other country in the region and all over the world, production cost and other consumption criteria of Viet Nam's steel industry were higher. This cannot be solved in the near future (see table 1.1) and reduce competitiveness of the industry in local markets.

To summary, under participation in AFTA/CEPT and regional integration process, Viet Nam's steel industry has fewer advantages.

- + **Alternative 3:** Policies of steel industry must be based on efficiency measures. It is dangerous to pursue independent economy by building all industries at any expenses. Of course, we should consider fairly between politics and economic development. Economic and social efficiency is the most important. If there is an unsolved contradiction in state and firms' benefits, in our opinion, what benefit state then state must follow, what benefit firms then firm must invest.

In general, Viet Nam's steel industry is now operating ineffectively, many enterprises belonged to Viet

Nam Steel Corporation, say Thai Nguyen iron and Steel Company and steel mills of the metal and material company in central region, suffered losses for a long time. Other steel pipe making, steel processed joint ventures and international trade center are also in the same situation.

Under low business efficiency and, huge investment continuously bring losses Viet Nam's steel industry become a burden of the nation. Hence, we need to consider and select appropriate steps.

2.2 Development strategy of Viet Nam's steel industry

2.2.1 Development strategy of steel industry in the period 2001-2010

2.2.1.1 Objectives

- Ensuring stability of domestic market. Local steel enterprises should hold market share of 70-80% after implementing AFTA/CEPT. For traditional products (coil, long), the production shall fully meet domestic demand and gradually export;
- Investing intensively current steel mills to maintain capacity, improve quality and use modern technologies in production. The investment must be considered carefully;
- Strengthening the steel industry in which VSC is essential. Rearranging business and production system to increase competitiveness. Stopping operation enterprises producing low quality products, causing environmental pollution and bring losses;
- Gradually reducing state's protection for steel industry. Implementing open policy to attract foreign investment in both upstream and downstream. Ensuring that after the year 2000 there is no state's protection in steel industry and business production system following market mechanism is formed.

2.2.1.2 Steel demand and market projection

Due to deficient and inconsistent statistics of Viet Nam's steel industry performance and local steel used industries have no strategic forecasts, therefore an accurate projection for Viet Nam's steel industry is impossible. According to documents on demand projection of VSC (with the help from JICA), the projection of VAI and BHP completed in 1993, of NKK in 1994 and of NIPPON STEEL in 1994, we are in favor of the steel demand and market projection done by VSC with the help from JICA. This forecast was based on scientific base and suitable for practice in Viet Nam.

Table 2.1 Overall projection of Viet Nam steel market

Năm	Demand of market (ton)	Average per capital (kg/person)	Average GDP (USD/person)	Output ratio long/flat steel (%)	Product rate Expectation
1998	1,900,000	24	310	65/35	60
1999	2,090,000	26	330		
2000	2,300,000	28.2	253	61/39	65
2001	2,540,000	30.7	380		
2002	2,800,000	33.4	408		
2003	3,080,000	40	472		
2005	3,700,000	42.2	505	55/45	73
2010	5,700,000	62	740	50/50	73

Table 2.2 Market demand projection by kinds of products

Sort	2000		2005		2010	
	Volume (1000 tons)	Density (%)	Volume (1000 tons)	Density (%)	Volume (1000 tons)	Density (%)
- Total demand	2,300	100	3,700	100	5,700	100
+ Long products	1,400	4	2,040	55	2,850	50
- Round bar steel, striped steel	670	29	1,000	27	1,420	25
- Coiled steel	550	24	600	16	750	13
- Figured steel	180	8	440	12	680	12
+ Flat products	900	39	1,660	45	2,850	50
- Plate steel	180	8	260	7	450	8
- Hot rolled steel	240	10	370	10	740	13
- Cold rolled steel	160	7	330	9	570	10
- Kinds of sheet iron plated	180	8	400	11	630	11
- Blowpipe, blend figure	140	6	300	8	460	8

As such, to fulfill domestic steel demand, Viet Nam total output of final steel product must increase by 8-10% per year during 2001-2010 period.

2.2.2 Some concrete orientations of the industry

- Final steel product output (rolling steel and after rolling processed products) in 2005 will be 2.8 million tones, in 2010 be 4.5 million tones meeting 80% domestic demand;
- Equipment and technology: in this period, modern equipments with small and medium capacity, advanced technologies should be chosen and product gains international standard. Investment capital is form steel companies and foreigners. Raw steel is produced by scrap-EAF technology;
- Increases self-sufficiency supply of billet, alternates partly imported billet. This is an urgent requirement of Viet Nam's steel industry, however, we suppose that in 2001-2010 period Viet Nam mainly has to import billet for rolling. Increasing billet production capacity by projects is presented in table 2.5. These projects bases on market demand for steel estimated until 2010 and current capacity

of the industry. The second one should be given priority. Feasibility of these two projects is fairly high. They do not require huge investment capital and correspond to practice of Viet Nam. Importing billet and final products at a relatively large quality still plays decisive role;

- VSC self invests some relatively big projects (about 100 million USD) that demand for its products is high such as billet, hot and cold rolling plates;
- Stimulates foreign investment in the industry in the form of 100% foreign capital or joint venture. To achieve efficiency the industry has to plan concretely and government needs to approve the master plan. We should only invest to produce specific steels, limit investment in rolling process and production of construction steel;
- Classifies steel production enterprises in Viet Nam basing on evaluation of quality and efficiency. Increases investment in profit enterprises and closes steel mills suffering losses, low quality and old technology. Accelerates freedom in steel industry. Equitizes some enterprises of VCS;
- Allows strong corporations of Viet Nam invest in steel industry;
- In the period 2001-2010, the industry will begin form hot and cold rolling to building high furnace, basic oxygen furnace preparing for apply of synchronic technology in the next stages.

Table 2.3 Alternative for investment projects

Project	Product	2000	2005	2010
Option 1: No investment in new facilities only investment to improve current facilities	1. Long products (round, figure, wire)	- Excess of capacity of 0.5 Mt. Need to export or operate not at full capacity - Minimum Import of 1.2 Mt. of square billet	- Operate at full capacity, fully matched domestic demand - Minimum import of 1.7 Mt. of square billet	- Minimum import of 1.6 Mt. of square billet and 1.0 Mt. of long product
Option 2: Limited investment : expansion of current plants, small scale of new investment	1. Long products (round, shapped, and wire) 2. Flat products (hot milling and cold milling)	- No new plants - Import of 0.8 Mt.s of products	+ Production of 0.5 Mt. of square billet + Import of 1.2 Mt. of square billet, and 0.6 Mt. of soft iron and scrap. - Production of 0.8 Mt. of hot milling, 0.2 Mt. of cold milling - Import of 1.1 Mt. of flat product, and 0.65 Mt. of flat billet.	- Production of 0.5 Mt. of long product- Production of 1 Mt. square billet, 1.1 Mt. of soft iron. + Import of 0.5 Mt. of long product, 1.2 mt. of square billet. - Production: + 1.2 Mt. of square billet + 0.4 Mt. of cold milling steel - Import: 1.7 Mt. of flat product; 1.3 Mt. of flat billet.

2.3 policy research for steel industry

2.3.1 Protection policy selection for domestic steel production

Domestic steel production is now strongly protected by state (level 4). State is imposing high tax on steel and steel product import. Non-tariff tools are used up. The current existence of prohibition of products that are produced sufficiently in Viet Nam, quota limitations and import control of products that are produced insufficiently... need to be eliminated early.

When determine tax reduction schedule to commodity following AFTA/CEPT, Products can be divided into three groups with different levels of tax reduction.

Group 1: the group with export advantages. Taxes imposed on these commodities will be cut down soon. They include agricultural products (rice, coffee, and tea), fishery products, textile and garment and rubber.

Group 2: the group that can compete with import commodities in the future. Tax reduction schedule of this group will be later and slower. They include vegetables, food, milk, electronic, machinery product, ship, chemical products (fertilizer, pesticide, processed rubber, tire, cosmetics and detergent) and cement.

Group 3: the group with low competitiveness. Tax reduction schedule for this group is slowest. The state's protection level still relatively high. These commodities consist of natural minerals and mental, paper product and sugar.

This classification is aimed to reach an appropriate tax reduction schedule and have corresponding measures to either facilitate export or protect local production.

As presented above, Viet Nam's metallurgy industry, in which steel is the most important, has a weak competitiveness.

Compares to other ASEAN countries, generally, steel industries in these countries do not really develop, it has the same price as Viet Nam's, over 400 USD per ton, so that it is difficult for them to compete against steel production of some countries such as Russia, Ukraine, South Korea... Currently, most of steel products from ASEAN are with low tax rate and classified into the group 1, except Indonesia and Malaysia where some thin non-alloy rolling steels follow CEPT slowest.

Bases on production situation and competitiveness of the industry and practical CEPT implementation of ASEAN countries, Tax reduction schedule of Viet Nam for steel products is planned with slowest cut down steps, especially such products out of the temporarily exceptional list.

Iron, billet, stainless steel, technical steel and specific steel (most of them have low tax rate, and cannot be produced domestically and play as inputs of other industries) are put into reduction list. Now most of them have a tax rate of 0% so in practice there are only about ten commodities with a higher tax rate need to be cut down since 1998 according to the schedule announced by Viet Nam government.

Tax reduction schedule:

2000	2001	2002	2003
15%	10%	10%	5%

Steels for construction, shape, small sized steel products... with a fairly high tax rate, are now produced domestically and controlled by import quota, are taken into temporarily exceptional list. The schedule of some particular commodities is given below.

	2002	2003	2004	2005	2006
- Constructive and figured steel		30%	20%	10%	5%
- Other plate steel	20%	20%	15%	10%	5%
- Roofed sheet	25%	20%	20%	10%	5%

Some restrict protections for steel industry need to be reduced rapidly. Viet Nam's steel industry cannot be working under non-tariff barriers. Quota and import source controls need to be eliminated. State should strengthen quality standard management; implement strict control over the market to prevent low quality products; accelerate competition within the industry to abolish sluggishness. Although it is being highly protected and have a slow tax reduction schedule, steel industry's investment trend and its structure transition need to be carried out as soon as possible avoiding passive cases at the last time. State's protection for steel industry, in our opinion, should not be extended over the year 2006.

2.3.2 Investment policy selection

Investment plays a vital role for the development of the steel industry. In order to use the capital effectively we need in-time and suitable policies and solutions.

Investment is an action for the future. In other words, investment only brings us results after we finished the investment. It is difficult to find soon the mistakes that we made during the investment process, the these result in a lot of bad consequences for a long time and take us too long to dealt with. Therefore, having a long-term policy for investment is very important. The mistakes that we make in building investment structure in the period 1976-1980 had negative impacts on the development process for many years. The innovation of investment in steel industry, which should be paid special attention from the leadership, has created a plentiful of good changes in the recent years.

The investment projects that need huge capital during 1976-1989 and then were basically completed, and currently we are in good condition for building an investment plan until the year 2010 and afterwards. At present, there are many changes both domestically and over the world so that we have to have visionary plans to outline long-term suitable investment policies in the transition process. Hence, investment policies need to be considered in many aspects.

Referring to capital sources, we have domestic capital, including that from state budget, from state-owned enterprises, from private enterprises and from people. Foreign capital includes official capital of foreign governmental and international organizations, capital of non-government organizations and

Vietnamese abroad.

Referring to capital distribution, we need to assign the capital according to economic industries helping to form modern economic structure and promoting the economic transition in favor of industrialization and modernization.

To fulfil above requirements we need to have specific mechanism and policies in mobilizing capital, organizing and managing investment capital, and in creating capital market and its related policies.

a. *Policy for domestic capital mobilization*

For investment of enterprises, enterprises that belongs to any economic sectors are all equal in business, and in re-creating capital for the development, apart from limited fields relating to security, national defense and some other special public welfare. Enterprises that operate in the same economic field all have to pay tax in the same way and have right to implement expansive reproduction.

Persistently stop any subsidies in any form such as price subsidy, tax reduction, low interest borrowing and so on.

For capital accumulation of people, in order to exploit and utilize effectively capital of people the state need to encourage any classes of people to carry out any business-production activities, consume reasonably, increase saving for investment.

The state needs to protect private capital, through which create favorable climate for people not only self-invest, (if they have ability and expectation) but also save and contribute to social capital sources. Building rapidly monetary and capital markets, at the same time, reforming banking and financial system. It's also the basic method to stimulate people to enrich themselves legally.

It is possible to say that if the capital of people and enterprises is mobilized and used effectively it will play very important role in economic development.

b. *Policy for foreign capital mobilization*

In building and developing steel industry of the country, besides the use of domestic capital it is also important that the state needs to have proper policy to exploit and mobilize foreign capital, from official sources of both government and non-government organizations. They mainly include the following sources:

Official Development Assistance (ODA). This is the non-refunded or low interest capital sources by foreign countries and international financial organizations. These sources are added to the state budget and state can use directly to invest or lend.

We need to have different policies to different countries and international financial organizations in mobilizing such huge capital sources, which may amount to a bill. USD per year or higher. In doing so we have to base on investment plans, construct the list of favorable investment projects and programs calling the capital from ODA agencies according to international practice.

We need to have different policies to different countries and international financial organizations to

mobilize the capital complying with their policies in the framework of Viet Nam's manner and policy. We also need to have effective policy for foreign debt management ensuring that the borrowing and paying ability is suitable to the country.

Foreign Direct Investment (FDI). This is a relative huge source. In the coming time, this source is perhaps much larger than that of ODA.

In the context that we still lack experience in international business, we need strengthen the mobilization of FDI capital. Because, on the one hand, like ODA capital, FDI capital generally helps implement technology transfer process, technical and professional training and create stable market. On the other hand, FDI capital is connected closely to the responsibility of preserving and developing capital that will reduce the debt burden of Viet Nam. The state needs to stop subsidies for the investment of enterprises. These enterprises must themselves pay both interest and principle from their own profit.

Capital form oversea Vietnamese. Vietnamese living abroad generally do not have much money, however they may be an intermediary bridge for attracting foreign capital, and in some cases they may contribute to invest into Viet Nam. The state needs to have stimulative policy to expand this source. In any case, state needs to have overall policy to mobilize every capital sources for socio-economic development.

c. *Policy for using capital*

Capital from state budget. Budget capital is derived from the domestic accumulation and foreign capital, mainly ODA capital. Budget capital needs to be used properly and effectively to promote socio-economic development.

Budget capital is also used to develop public constructions, steel industry projects, which are very important for the economy that private enterprises are not able to invest. Heavy industry construction projects will contribute to promote economic transition in favor of industrialization. These constructions need to be considered carefully and must be implemented mainly or fully by state budget. Budget capital should also be pourer in infrastructure projects, export-processed and special economic zones.

Additionally, budget capital is also used for lending, mainly from ODA capital to encourage investment in high effective and short payback-period projects to pay foreign debts. We need stop using budget capital to Subsidy state-owned enterprises that are operating ineffectively.

Foreign investment capital. The FDI capital, which is invested in Viet Nam according to foreign investment law of Viet Nam, is very important. We need to control socio-economic efficiency and environment of these projects.

In the future, we need to control the efficiency of projects that were granted investment license ensuring that the actual and projected results are the same and we also need to have adjustments, if necessary, to projects that were licensed but ran ineffectively.

State should encourage private foreigners to invest in some sectors on which the country focuses.

Capital of oversea Vietnamese. We should have policy to stimulate the investment of Vietnamese living abroad in domestic and joint venture projects. Creating favorable conditions for oversea Vietnamese re-invest and draw profits according to the law.

Capital of enterprises firstly should be used to re-invest, increase effectiveness and expand business production, create job for labor.

Public and private enterprises are encouraged to cooperate with each other to form enterprises in many forms of possession.

State needs to build the plan for the development of state-owned enterprises, through which formulates stipulations on equitization. State also needs to identify clearly the list of enterprises that will be reshuffled.

Private sector is encouraged to develop in some fields that do not conflict with the law. Putting aside a part of income to invest directly or contribute to construct domestic capital market.

State needs to have policy to encourage production and saving, increase saving proportion to develop economy. Building investment plans to gain the highest efficiency. These plans are not the same with that in the centrally-planned mechanism before. They are merely oriented to create favorable condition for every investors and suitable to socio-economic policy of the country in each period.

State's investment in steel industry in both short term and long term is necessary, however this investment should focus on transition trend to increase competitiveness of the industry. State should endow capital (billions of USD) into big projects with modern technology (after 2010).

In the period 2001-2010 investment will be carried out in depth, broad investment will be limited. These investments in both local and joint venture enterprises should be considered carefully in favor of specific steel production with small and medium scale, not in favor of rolling process and steel for construction because now its supply exceeds demand. Besides, efficiency, billet import ability should also be taken into account. In our opinion, importing billet for rolling and buying a part of materials from abroad is efficient and feasible.

State should pay attention to scientific research activities to develop steel industry in the future. This is a program of the state. We need research, assess entire natural material provided for steel industry, steel technology advancement in the world and put steel industry in the economy as a whole not in VCS's opinions... relying on these bases to early draw plan and implement investment in the industry in the future.

State should subsidize a proportion of power price as an investment for steel industry.

In the last years, state had a strong support for VSC. In 1999, the total business capital of VSC at the end of financial year is 1,410,393 billion VND, out of which 1,040,068 granted by state budget. In fact,

VSC had minimized financial problems owing to state's support. This should be reviewed. State should only support efficiently operating enterprises of VSC and help to relieve social consequences caused by bankruptcy of some enterprises. State cannot always "feed" VSC. Financial supported policy of state in the next few years will also focus on private firms if they are working effectively and comply with state orientations. Enterprises producing steel for export and import substitute should be given priority.

2.3.3 Non-tariff policy

Combining tax reduction with non-tariff barrier elimination flexibly and properly in order to maintain the protection for domestic production in necessary cases.

Simultaneously, we need to build and complete an effective non-tariff system that must be suitable with and accepted by international practice. This will create a proper protection for domestic producers while we have to reduce tax barriers.

Currently, our non-tariff barriers are very simple, mainly including license and quota. We are in short of systematically technical, quality controls like in other countries, especially; such protections are not oriented in favor of domestic production.

Given below are some orientations of Viet Nam's non-tariff policy system when Viet Nam takes part in commercially economic cooperation with ASEAN and APEC.

Firstly, these policies have to guarantee the following targets:

- Make it favorable for the development of Viet Nam's trade, increase the foreign trade turnover and budget revenue;
- Protect properly domestic production, encourage the innovation of technology, and strengthen goods competitiveness in the world market;
- Promote the integration of Viet Nam into world trade and the implementation of the party's reform policy;

The building of non-tariff policy system, at the same time, has to follow principles below;

- Non-tariff methods applied must be suitable with international practice that were specified by WTO;
- They must also follow specific stipulations by ASEAN and APEC;
- Non-tariff system must be strong enough to protect domestic infant production as well as facilitate enterprises to reform, strengthen competitiveness in the world market;
- Although commercial profit is the major target, but we also have to have close and suitable combinations between tariff measures with non-tariff ones, between free trade as designed by CEPT with domestic production protection for interests of the nation;
- The non-tariff system must guarantee an exit if domestic trade is threatened by international competition;
- Viet Nam's tariff measures should be oriented to promote free trade, increasingly eliminate

trade obstacles according to the development level of the economy, create favorable conditions for the development of trade.

In order to apply non-tariff policies effectively following targets and principles mentioned above simultaneously suitable with domestic production protection we need to identify clearly the list of commodities for protection and classify them in different protection degrees. The identification of the list must be based on both qualitative and quantitative analyses of domestic demand and supply, competitiveness of domestic goods and the changes in the world market.

Although current condition does not allow us to implement a profound research, however base on the practice in Viet Nam and other ASEAN countries, in the short term, we can plan to classify the commodities for protection of Viet Nam as follows:

- Level 1(highest): the commodities in the sensitive list
- Level 2: the commodities that are very important to the economy such as automobile, motor, fertilizer, pesticide, cement, iron and steel...
- Level 3: the commodities that can be produced domestically

The protection for the commodities out of the protection list above need to be alleviated soon and free trade should be implemented.

Viet Nam's non-tariff policy system first can be built in 4 major groups based on rearrangement of old non-tariff measures and creating of some new measures suitable with stipulations of WTO:

Group 1: Common non-tariff measures in the framework of WTO:

- Automatic and non-automatic import license
- Quota: According to WTO, including quantity quota, quantity and tax combined quota and quantity and special license combined quota.
- Checking before goods are on board
- Origin principle
- Antagonistic tax
- Anti-dumping measures
- Prevention methods

Group 2: Technical measures:

- Technical standard regulations
- Quality regulations
- hygiene verification
- Sanitation protection

Group 3: Administrative measures: include other current import-export regulations of our country such as import-export origin, state-owned enterprises... that are not put in group 1 or 2 as stipulated by WTO

Group 4: Other macroeconomic policies that have indirect impacts on export and import such as: exchange rate mechanism, payment, interests rate, banking credit, investment policy...

If we follow tariff and non-tariff measures regulated by CEPT we have to reduce non-tariff barriers after finishing our non-tariff system. This needs to be done urgently because it will take a long time and require the cooperation of many related ministries and industries.

After completing the non-tariff policy system, we start to eliminate non-tariff barriers. This process will be carried out closely with tariff reduction based on three above-analyzed levels and can be as following steps:

- Step 1: begin with the reduction of administrative procedure
- Step 2: reduce common non-tariff measures
- Step 3: promote to apply technical measures and other invisibly indirect protection measures.

Apart from measures in tax reduction schedule and financial support, the elimination of limitations of import quantity and non-tariff barriers is also very important under integration process into APEC and WTO.

The elimination of import quantity of some commodities following CEPT should be abolished early in order to get preference from other member countries.

Other non-tariff barriers should be step by step eliminated under integration Process

Building quality standard manual of steel industry corresponding to international regulations and publishing quality management policy for easy implementation of enterprises.

2.4 Integrated steel mill building

In our opinion, it is now too soon to affirm whether or not to build integrated steel mill in Viet Nam. We can only affirm that the building of the integrated steel mill in the period 2001-2010 is impossible.

To build integrated steel complex, we need meet restrictive conditions and have full scientific ground. The period 2001-2010 should be the time for pre-feasibility. We will only be able to make final decisions after 2006, at that time the impact of regional integration will fully come into effect. Integrated mill can only be built when there is a sufficient market demand (about 9 million tones per year) and an availability of necessary material, power, water source and proper location. According to us, the building of integrated mill should be considered after 2010, maybe from 2013-2016.

2.5 Solutions to increasing business effectiveness of Viet Nam's steel companies

2.5.1 market development

In the past years, market development has been paid much attention, currently the market of companies includes: local market is divided into three areas: the Central, the North and the South; foreign market is Laos, Cambodia, Taiwan, Hongkong and so on. However, under the international integration, our

companies will have to face with severe competition from export products so that companies should pay special attention to the market development. This task may follow below directions:

2.5.1.1 Strengthening traditional markets

The traditional markets of Viet Nam's steel companies are in the north, the central and in the south. The companies continue to maintain and occupy these markets, exploit these markets in depth, control capacity and structure of the markets, fluctuations of the demand for construction materials, and take care of socio-economic development strategies of the state and regions.

Maintain and expand the markets via cooperation with construction material industries in supplying and consigning goods in order to increase consumption and, at the same time, introduce product trademarks in provinces. Strengthen prestige and keep the cooperation in the long term.

In doing so, the companies need:

- Increasing the quality of products and services for traditional consumers, the companies always have to guarantee the quality of products and services;
- Create favorable conditions and give priority in payment to traditional consumers, the companies should permit these clients to defer payment in a given period;
- Develop some new products and diversify products
- Favor in price to some regular consumers

2.5.1.2 Expanding to potential markets

At present, owing to the increasing of technical science and living standard the demand for steel is on the rise, it is estimated that until 2010 the steel amount demanded of the country will reach to 7.5 mill tons per year. Therefore, steel companies are required to invest in production so as to meet the demand of the market.

In order to penetrate in all local markets and export we need to have a system of synchronous measures: such as product orientation, quality, quantity, promote marketing, organize proper selling channels, expand the network in populous areas to make favorable condition and meet the demand in time, implement after-sale service. These are important measures in the integration of the companies.

2.5.1.3 Promoting market research

Market research is a compulsory task of all businesses. It is prerequisite to penetrate market of companies. To get the success in business the first thing that all enterprises have to do is to perceive fully and exactly what are related both directly and indirectly to the market demand, preference and purchasing power. These activities will help identify vital markets and determine potentials of markets that are not fully exploited yet.

In the recent years, with the reform of the country a lot of metal business enterprises of Viet Nam General Steel Corporation and some private firms do metal business. The demand for construction is

increasing. Hence the companies are required to be able to estimate the demand throughout market research.

A team that specialize in market research needs to be formed in each company. We need to have a market research staff team with high professional knowledge to outline suitable production and business plans increasing the efficiency. This team will help leadership build and carry out production and business plans more effectively. The information reported must fulfill the requirements: rapidly and exactly. In business now we can only project exactly market demand and its fluctuations to determine clearly: what to produce, how much to produce and how to export if we receive and process information timely.

Market research includes observation, analysis, projection of market fluctuations and other changes that may have impact on the companies' market.

Through market research the companies will build measures to increase quality of products and set reasonable price.

2.5.2 Improving sale network and sale method

2.5.2.1 Improving sale network

The improvement of sale network is very important so that companies should have some following measures:

- Strengthen current sale network: companies should upgrade their stores, selling places to attract consumers, increase the number of consumers and opportunity of selling. Companies need to build investment plan for vital stores.
- Reassess the operation effectiveness of stores, create good condition to concentrate capital, amount of goods for profitable stores and also have supports for loss stores or dismiss them in necessary cases.
- Create new selling places: companies need to open more selling places both locally and abroad.
- Reinforce the rights of stores: in the past time these stores have proved their role in the market and help the companies carry out well production and business. However, to full play the capacity of stores Viet Nam's steel company need to allow them to expand suitable business in the market

2.5.2.2 Improving sale method

In the past years, sale methods that applied by companies are very abundant, however the structure is still not suitable. In the coming time, the structure should be changed. The companies should continue to increase wholesale to raise the revenue and create the close relationship with their consumers. Wholesales that are not through storehouse should be encouraged because this method helps companies reduce the costs, gain higher profit and quicken the capital circulation. To promote this method is not easy for unusual demand is relatively huge and it can be met in many ways.

Develop agents, especially agents for foreigners, to increase revenue and create more jobs for

workers. Increasing selling agents to foreigners to get more hard currencies to help import activities of the companies. This method only cost companies preservation and carriage fees. When goods are sold the companies check the revenue so they do not need capital for buying goods. Besides wholesale the companies need to strengthen direct sale.

Diversify sale methods to serve the demand of any consumers, apply and develop a wide range of sale method in order to meet the new business conditions. Using marketing tools for sale promotion.

Companies need to maintain and develop relations with other agencies that usually buy their products with a large amount. Companies should sign consumption contracts with such consumers to stabilize the sale and increase their prestige. Economic contracts are the way to achieve business targets safely hence they should be accelerated in selling products.

For new markets, companies have to have proper penetration strategies, because these are places that companies can open the relations with other new consumers. Therefore, companies should attempt to collect and analyze information of fluctuations in the market in order to find business opportunities suitable with the potential of the companies.

2.5.3 Applying flexible price policy

In current period, when steel supply exceeds, applying flexible price is very crucial for steel companies to attract consumers and increase revenue.

Base on production cost, demand and supply, market price and competitiveness of the rivals the companies usually have to adjust price to encourage clients to buy their products ensuring high profit. Price is a factor of competition. It plays a vital role in business. Therefore, setting price is very important. Companies should have specific policy to each kind of product, receive quickly information of price changes in the market to adjust in time. Additionally, companies should also have price policy for each region to strengthen the competitiveness of the company and gain the highest possible profit.

For payment methods, companies should allow deferred payment and accept payment in any form cash, cheque...

2.5.4 Well organizing services in business

Well organize services in business to attract clients

- *Carriage service*: one of the characteristics of steel product is long and bulky, therefore the transportation is very difficult. To do the best service the companies should carry goods to hands of consumers. If consumers are near the stores the companies should bear the cost of transportation, if not, the companies should charge the cost reasonably. For foreign clients, there need to be proper agreement on transportation method and other regulations;
- *Organizing advertisements*: Advertisement is a tool to promote sale, advertisement has an important impact on consumers. It helps consumers improve their knowledge of the products, and improve the image of the products. The demand for steel products in increasing, therefore

- advertisement is very important. To compete against foreign products companies have to organize advertisement activities well not only domestically but also internationally. Companies can do advertisements internationally in two directions: standardization and regionalization. Advertisements should include measures against rivals to penetrate the market by similar products;
- *Fair, purchase encouragement:* Steel companies should expose their products in fair and encourage purchase to excite consumers' demand;
 - *Sale promotion:* Companies can promote sale in three ways: to introduce new products, to increase consumption of the products and to attract directly consumers at detail sale places.

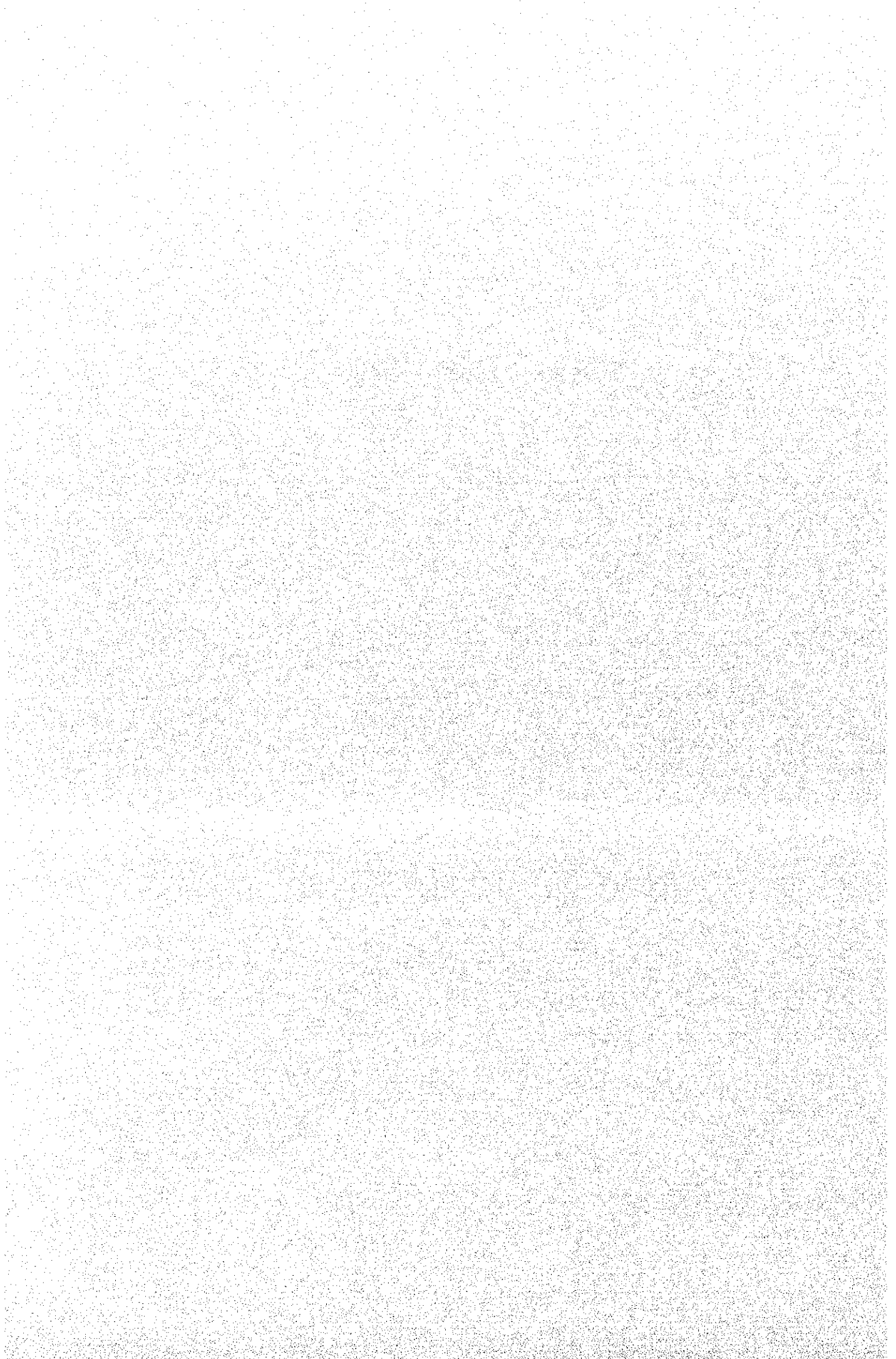
2.5.5 Increasing international integration

International integration is necessary for Viet Nam's steel companies in the context of increasing economic regionalization and globalization. This international process has positive effects on the development of the companies. It will create open relationship between Viet Nam's steel industry and that of the world. It is a chance for Viet Nam's steel industry to catch up with that of the world, to find new consumers and to make a stable stand in the world market.

Besides opportunities, the international integration also brings Viet Nam's steel companies a lot of difficulties and obstacles due to low starting point of our industry as compared to that of developed countries in the region; Viet Nam economy is developing slowly and facing many difficulties and challenges in the international integration; a lot of resources are not ready to exploit, the competitiveness in the world market is weak. Therefore companies have to prepare for this integration.

- The steel industry have to increase competitiveness against import steel when the import tax is reduced to 5% and non-tariff barriers are eliminated.
- New factories have to meet international standard on productivity and other technical criteria to dominate local market and export.

第3章 纖維・縫製



Viet Nam's Textile and Garment Industry Development

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1. Characteristics of textile and garment industry

- The final products of the textile and garment industry are garments, a kind of essential consumer goods whose importance for human being ranks just after that of human demand for food. This demand will increase progressively alongside the increase in people's income. Frequent changes are seen in the products of this industry and their colours and designs become increasingly diverse as a consequence of external influences. These products are required to meet different demands of human being, such as travel wear, formal wear, worker's protective clothes, casual wear and so on. The higher are the people's living standards, the more varied are the demands for the products and the greater is the need for their production. Production that meets the market demand for small lots and shortened period of time from production to market is the current trend of the textile and garment industry.
- Scientific and technological progress also has a strong impact on the production and consumption of textiles and garments. As a result of the information and communications technology development, new fashions and models can be spread very quickly; it can take only one day for a new fashionable design introduced in United States to be found in Hongkong and Taiwan, etc. Therefore, the key to improve the competitiveness of garments is their frequent close link with the market and their ability to meet the rapidly changing market demand for consumption. The industry's production must be dynamic enough to catch up with market demands so that the products can be able to compete in the market.
- The textile and garment industry is characterised by upstream and downstream linkages as follows:
Materials ---> Spinning ---> Fabric weaving ---> Printing and dyeing ---> Sewing

The downstream segments such as materials production (cotton planting, production of artificial and synthetic fiber (filament) and spinning often require a certain production size and large investments. The upstream segments can be of small and medium size; particularly, the initial capital investment required to create one job in the sewing segment is just around USD 1,000. Fabric dyeing and finishing segment is also an important one that is required to ensure good quality and proper colours of the fabric to serve as an input to sewing segment and to diversify products. The application of new technologies in downstream segments has become

more common, such as creation of new raw materials and materials, and automation that aims to improve quality and productivity. New technologies have also been applied to sewing segment, e.g. introduction of information technology into marketing, designing and so on. However, as much as 80% of the work in the components assembling (sewing) segment, which is labour intensive, requires much manual labour. This industry is therefore a labour intensive one whose comparative advantage belongs to the countries that have abundant and cheap labour. In addition, another advantage of this industry is that production can be organised in small- and medium-sized enterprises, and even on a household scale.

The vertical linkage in the industry from materials to final products, which are garments, is not necessarily developed in a close manner like the "self-sufficiency" model. Cotton can be imported to produce yarns, yarns can be imported to produce fabric, or fabric can be imported to produce garments, depending on expected economic efficiency. However, if a good linkage among different segments can be created, costs can be reduced substantially, more jobs can be created, and especially the ability to take initiatives in export production can be created, thereby improving the economy's value added.

- Textile and garment industry is a labour intensive industry whose technical requirements, particularly in the garment sector, are not high. From the experience of other countries, this industry occupies an important position during the early stage of a country's industrialisation. And the wave of the industry's development is shifting from high labour cost to low labour cost countries like Viet Nam at present.
- A characteristics of the industry that should be further emphasised is that production can be organised on small and medium scale, creating subcontract-based networks.
- Another characteristics of the industry that should be further emphasised is production can be organised on small and medium scale, forming up subcontract-based processing. Moreover, household-based production or production following the street industry model can even be organised of strict quality control can be ensured. Such production scale facilitates job creation and mobilisation of funds among the population. Combination of different production scales, i.e. large, medium and small, can be made.
- This industry also affects the development of supporting production network such as production of components, auxiliary materials like sewing thread, buttons, fasteners, packages and so on. This enable the creation of trades and jobs for the people living in the areas surrounding factories.

2. Textile and garment market in recent years

Export performance

Since the adoption of the Vietnamese Government's renovation policies, the value of exported textiles and garments has kept increasing rapidly despite of the collapse of the former Soviet Union and Eastern European markets. Export value increased from over USD 100 million in 1990 to USD 1.5 billion in 1999.

Textiles and garments export value

(in million USD)

Year	Textiles	Garments	Textiles and garments	Share in total export value (%)
1990	27.8	90.7	118.5	7.9
1991	29.4	142.9	172.3	9.9
1992	39.6	357.2	396.8	15.6
1993	61.7	521.6	582.7	17.8
1994	107.8	691.6	799.4	17.8
1995	147.8	878.8	1,026.6	18.2
1996	175.5	1,162.7	1,338.2	19.8
1997*	171.0	1,332.0	1,503.0	16.4
1998*			1,450.0	15.5
1999*			1,500.0	15.0

Source: Report on "Vietnam's Textile and Garment Industry - Successes and Future Challenges" prepared by Hal Hill, 1998

* Statistical Yearbook, General Statistical Office, 1999

The textile and garment industry has become the largest exporting industry among the top ten exporting industries whose export value exceeds USD 100 million.

Products with high export value are shown in the following table:

Unit: million USD

	Export items	1997	1998	1999
1	Crude oil	1426	1239	1860
2	Textiles and garments	1503	1450	1500
3	Shoes and sandals	965	1031	1350
4	Rice	891	1100	1020
5	Fisheries	781	858	950
6	Coffee	502	594	585
7	Rubber	191	127	114
8	Cashew nuts	133	117	132
9	Handicrafts and fine art articles	121	110	120
10	Coal	110	102	96

Source: Ministry of Planning and Investment

A majority of exported garments is produced on a subcontract basis in which the foreign buyer/order maker supplies the local producer with imported fabric and auxiliary materials needed for garment production and then buy the final products. There are cases where the buyer even supplies the local producer with equipment required for garment production and then gets the final products as a payment for the equipment. This way of doing business is appropriate at the initial stage when the Vietnamese garment producers and exporters are still in lack of the knowledge of international markets. However, the value added that can be created from that kind of business is low and the production and business operations of local producers depend greatly on foreign orders.

Following are some analyses of Viet Nam's textiles and garments export and import performance.

Net trade value

From the difference between the value of export and that of import of the entire textile and garment industry, it is clear that the industry has a relatively large net textiles import surplus. Viet Nam's net trading ratio (NTR) has been high and relatively consistent for a long period:

Net trading ratio in Viet Nam's textile and garment industry

	Textiles		Garments		Textiles and Garments	
	NET X (mill. USD)	NTR (%)	NET X (mill. USD)	NTR (%)	NET X (mill. USD)	NTR (%)
1990	-107.4	-60	84.9	0.88	-22.5	-0.09
1991	-154.2	-0.72	136.3	0.89	17.9	0.05
1992	-292.3	-0.79	334.8	0.88	42.5	0.06
1993	-491.1	-0.80	491.0	0.89	-0.1	0.00
1994	-599.9	-0.74	649.7	0.89	49.8	0.03
1995	-843.4	-0.74	828.1	0.89	-15.3	-0.01
1996	-100.7	-0.74	1104.0	0.90	96.7	0.04
1997*	-855.0	-0.78	936.0	0.51	79.0	0.03

Note: NET X = X-M (exports minus imports)

NTR = X-M/X+M

Source: Hal Hill

* The author's calculations are made with data from the Report on Export and Import Performance produced by General Statistical Office.

The above table shows that the garment industry tends to export more than the textile industry. However, the value of garments illegally imported from China has not been estimated and included in the garment industry's import value. Viet Nam's textile industry has become a net importer because a bulk of materials and fabric required for contract-based garment production are imported.

Compared to some countries in the region, the share of Viet Nam's textiles and garments export in the total export value is low, reflecting limited local supply ability. A problem that should be addressed is the renovation of the textile and garment industry's production structure so as to improve its efficiency.

Unit export price

Data on unit export price serves as an indicator for export products' quality comparison. Although the data are in a simple, unprocessed form and their quality depends much on the accuracy of records and observations over products that are very inhomogeneous, the author of the study entitled "Textile and Garment Industry in Viet Nam: Successes and Future Challenges", Hal Hill, shows some data to compare Viet Nam's textile and garment unit export price with that of several countries in the region. These comparisons show that Viet Nam's textile and garment industry has a much lower unit export price compared to other countries. This also implies that Viet Nam's textile and garment industry still relies on

exporting low value-added products. If the industry is able to diversify into products of higher quality and value-added, its export value would increase while its production costs decrease, and export efficiency would be improved. A survey conducted by Thornton in 1998 shows that the production cost in this industry can be reduced by 25% or more. The renovation required does not simply cover the product mix, but also an improvement of quality control, products delivery and so on, thereby bringing about higher prices that customers are willing to pay for.

Unit price for selected garment exports
cross-country comparison (Viet Nam = 100)

SITC	Viet Nam	Indonesia	Thailand
8412	1995	100	191
	1996	100	128
8413	1995	100	185
	1996	100	259
8414	1995	100	105
	1996	100	100
8415	1995	100	148
	1996	100	157

Source: Hal Hill, calculations based on UN data (by dividing export value by export quantity)

This is a useful reference for Viet Nam. The past experience of East Asian countries in this regards is one of shifting from low value added products to high value added ones with an aim to break protection barriers of Western countries in the form of quota-based quantitative restrictions and consequently increase their export value.

Markets for Viet Nam's textile and garment exports

- Among the quota-bound markets, EU is a large market for Viet Nam's garment exports. On the average, the value of garment exports grew at more than 16 percent per annum over the past years.