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Journal of East Asian Economic Integration
An Analysis of the New Trade Regime for State-Owned Enterprises under the Trans-Pacific Partnership Agreement

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This paper analyses the new discipline on state-owned enterprises contained in the recently concluded Trans Pacific Partnership Agreement, and evaluates various factors that influenced the shaping of its specific rules. The new discipline consolidates and strengthens related provisions in current trade regimes, reflects various aspects of trade disputes between China and the US, and adopts, as its general underlying rationale, the principle of competitive neutrality. The new discipline contains elements that may challenge the multilateral trade regime, and may serve as a role model in regulating state-owned enterprises, including subsidies in services trade in other on-going trade negotiations. The new regime makes us think hard about fundamental issues regarding enforcement of competition policy against state-owned enterprises, treatment of non-market economies, and how to deal with effects of subsidies in international trade, bringing competition issues back on the trade agenda.

Keywords: State-Owned Enterprises, Competitive Neutrality, Competition Policy, Non-Commercial Assistance, Subsidies, Services Trade
JEL classification: F13, F15, L32, L44

I. INTRODUCTION

The negotiation for the Trans-Pacific Partnership (TPP) Agreement, a mega regional trade agreement among 12 countries, was concluded on 5 October 2015. One of the new features of this regional trade agreement is that it contains a stand-alone chapter on state-owned enterprises (SOEs). Some of the rules contained therein are not completely new, as it draws upon related disciplines that already

* This work was supported by the Catholic University of Korea, Research Fund 2015.
1 The participating countries are Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, US, and Vietnam.
exist. However, there had never been a separate, integrated discipline specifically covering SOEs before. In particular, the restriction on what is called “non-commercial assistance” is a significant new addition to what the current trade agreements provide. The TPP SOE discipline therefore sets a new standard, a minimum floor, which will affect other negotiations such as TISA, TTIP and RCEP that are still on-going. Since many prominent SOEs are engaged in the services sector, its ramifications for services trade rules are potentially great. So far, there are no comprehensive discipline governing subsidies in services. Given such significance, it is worthwhile to analyze the substantive rules of the TPP SOE discipline and understand the background from which they were born.

Three distinct sources of influence on the TPP SOE discipline can be traced. First of all, the TPP SOE discipline integrates and further strengthens relevant rules in the existing trade regimes such as the WTO and bilateral FTAs. The TPP therefore has a consolidating role. The main multilateral instrument on SOEs in the WTO is the GATT Article XVII on state trading enterprises (STEs), which was inspired by the “fear that some government-sanctioned monopolies might play fast and loose by manipulating markets” (Hafbauer and Cimino-Isaacs, 2015: 686). However, the article applies only to STEs that are monopolies or those that have special rights and privileges, and are limited to trade in goods. The article is rarely invoked these days.2

Since NAFTA, many bilateral trade agreements the US has pursued typically contain provisions regarding SOEs under competition chapters. Here again, main concern is about those state controlled entities that have special privileges and designated monopolies rather than SOEs in general. In the NAFTA, the SOE provision has been specifically included to address state dominated energy and telecommunication sectors in Mexico. Mexico had not liberalized these sectors under the NAFTA, and the US sought to discipline possible anti-competitive actions of state enterprises through the competition chapter (Yun, 2007). In the KORUS FTA, the concern with state enterprises were minimal and only non-discrimination obligation was introduced with respect to state enterprises. The pinnacle of SOE discipline is embodied in the very one-sided US-Singapore FTA,

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2 For earlier literature on state trading, see Cottier, Mavroidis and Schafer (1998).
where Singapore’s state enterprises are subject to extensive transparency rules.\(^3\) The TPP SOE discipline draws upon all these existing regimes, building on them by extending the scope of coverage and sometimes “re-organizing” existing obligations to overcome what is seen to be shortcomings of the current regime in dealing with past trade disputes.

Second, as described above, it has broken the tradition of placing SOE rules under the competition chapter, and set up a stand-alone chapter on SOEs and designated monopolies. In this, it is firmly based on the principle of what is known as “competitive neutrality.” The competitive neutrality concept provides an explanation as to why SOEs may behave differently from private firms, and offers a justification for setting up a separate regulatory mechanism apart from competition law.

No doubt, frustration with increasingly aggressive use of SOEs for industrial policy by China, allegedly propped up with subsidies, has probably played a big role in this attempt to create an international regime on SOEs. Whether or not China is a member of the TPP, the TPP SOE regime will significantly pressure China, as the new SOE regime is set to become the model for developing international trade regime regulating commercial activities of SOEs. In particular, disagreements between the US and China on trade and other legal issues seem to have influenced the shaping of some of the specific rules in the TPP SOE chapter.

In the following, this paper analyses how these factors may have influenced the shaping of specific rules in the TPP SOE regime, and discusses implications of the result for other on-going trade agreements, especially the Trade in Services Agreement (TISA). Section II goes through the main elements of the SOE regime, simultaneously interpreting or analyzing them in light of existing international rules and trade disputes. Section III discusses at length on how the competitive neutrality principle has been incorporated into the TPP SOE regime. Section IV draws implications for the TISA negotiations, with the aid of analysis undertaken in preceding sections, and Section V concludes. At the time of this writing, the agreement had not yet entered into force. The text released after the conclusion of

\(^3\) This one-sidedness has been rectified by the TPP Agreement. “The US-Singapore Letter Exchange on SOE Transparency” which confirms that Singapore is deemed to have complied with its competition chapter obligations under the US-Singapore FTA if it complies with the TPP SOE Chapter (which applies to all members equally), is fully incorporated into the TPP Agreement.
II. MAIN ELEMENTS OF THE TPP SOE REGIME

Chapter 17 of the TPP Agreement on “State Owned Enterprises and Designated Monopolies” (SOE Chapter, hereafter) consists of 15 articles and six Annexes, with a separate Annex IV, containing a list of non-confirming activities by country. The main purpose of the SOE chapter is to ensure that special benefits bestowed upon SOEs or designated monopolies (DM, hereafter), do not breach market access promised in the other chapters of the agreement, and to fundamentally limit such benefits to SOEs that adversely affect trade and investment interests of contracting parties. The following section discusses the main obligations of the TPP SOE regime. The focus here is on SOEs rather than designated monopolies, although designated monopolies include state monopolies, which themselves may be SOEs as defined in the TPP.

1. The Scope

TPP SOE rules are applied to the “activities of state-owned enterprises and designated monopolies of a Party” that affect “trade or investment between Parties within the free trade area.” An SOE is defined as an enterprise that is principally engaged in commercial activities and is owned or controlled by the state. The definition is important, since it determines the scope of the agreement’s effect.

Under the TPP SOE definition, the SOE is owned by the state when the government directly owns more than 50% of the share capital. Presumably, more than 50% ownership gives the state managerial control of the SOE. The state can also control the SOE when it controls more than 50% of the voting rights through ownership interests or holds the power to appoint a majority of members of the board of directors or any other equivalent management body. The emphasis is therefore on “control” by the government rather than mere “ownership.”

There are three criteria with which to determine whether activities of SOEs are commercial. First, the activities must be meant for profit. Activities based on not-for-profit basis or on cost-recovery basis are not subject to SOE discipline. Second, the good or service is supplied in the “relevant market in quantities.”
Third, the SOE is able to determine the price on its own. SOEs are still construed to be able to determine pricing, production or supply decisions when there are measures applied to the “relevant market” which are “general.” The enterprise is thus an SOE when it fulfils these two criteria of commercial activity and state ownership or control.

The discipline only applies to SOEs of significant size, with annual revenue derived from commercial activities of more than 200 million Special Drawing Rights in any one of the three previous consecutive fiscal years. The threshold is to be adjusted for inflation at three year intervals according to a formula using a composite SDR inflation rate specified in Annex 17-A (Art.17.13.5). For developing members such as Brunei Darussalam, Malaysia or Vietnam, the base threshold is 500 million SDR for five years after the entry into force of the Agreement (footnote 35).

Coming up with a fairly concise definition of state owned enterprise can said to be a great feat of the TPP SOE discipline. Given the extremely variable forms and definitions of state owned enterprises among different countries, this would not have been an easy task. Although there are some distinguishing characteristics that set SOEs apart from private enterprises, there is currently no internationally agreed definition of an SOE. In some countries they are part of a government department whereas in others, they are fully incorporated, or even listed companies, where government may only have partial ownership. In many cases, they are set up to serve some public purposes and undertake various delegated mandate of the government, while undertaking commercial activities as well (OECD, 2009: 26-27). The variation is extremely wide even among the TPP member countries.

Defining the boundary between the public and the private is a tricky matter, especially for non-market economies, as demonstrated by recent trade disputes between China and the US (see Section II.2.2) below). This difficulty can be seen in the case of defining state trading enterprises for GATT Article XVII on state trading enterprises. The negotiators failed to come up with a clear definition and to date only a “working definition” exists.\(^4\) How well the TPP SOE definition

\(^4\) The “Understanding on the Interpretation of Article XVII of GATT 1994” defines state trading enterprises as follows: “governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through their purchase or sales the level or direction of imports or exports.” This definition is closer to the definition of designated monopolies.
serves different types and forms of SOEs of TPP members needs to be tested over time, especially because there is a built-in uncertainty in the definition: as to which entities will constitute an SOE will shift continuously with changes in the share of commercial activity and ownership (e.g., through privatization).

Nevertheless, despite the variety in the legal status or corporate form of SOEs, the TPP definition seems to capture the broad conceptual denominator of what constitutes an SOE in its two criteria; commerciality and government control. This is close to the World Bank definition, which refers to SOEs as “government owned or government controlled economic entities that generate the bulk of their revenues from selling goods and services.”

2. Major obligations

There are three major obligations arising from the SOE Chapter: “Non-discriminatory treatment and commercial considerations (Art.17.4),” “Non-commercial Assistance (Art.17.6~8)” and “Transparency (Art.17.10).” These obligations are examined in turn.

1) Non-discriminatory Treatment and Commercial Considerations

SOEs are required to act “in accordance with commercial considerations in its purchase or sale of a good or service.” Commercial considerations mean “price, quality, availability, marketability, transportation and other terms and conditions of purchase or sale; or other factors that would normally be taken into account in the commercial decisions of a privately owned enterprise in the relevant business or industry.” Exception to this rule is provided for any public service mandate that the SOE has to fulfil. Public service mandate means government mandate pursuant to which an SOE “makes available a service, directly or indirectly, to the public…” Services here include distribution of goods and supply of general infrastructure services. The SOE however have to fulfil its public service mandate in the TPP SOE Chapter, and only applies to the purchase or sales of goods, and not to services, production or investment.

in ways that are “not inconsistent” with its non-discrimination obligation with respect to enterprises investing in the “relevant market” in its territory.

The non-discriminatory treatment obligation prevents discrimination on the basis of nationality when the SOE sells and buys goods and services. The SOE must provide non-discrimination to three categories: (1) goods and services of another Party, (2) goods and services supplied by an enterprise that is a covered investment in the “relevant market,” and to (3) enterprises that are covered investments in the “relevant market.” The language used is treatment “no less favorable than” those accorded to like goods, like services, and enterprises in the relevant market “of the Party, of any other Party, or of any non-Party.” The obligation therefore includes both national treatment and most favored nation treatment.

The “non-discriminatory treatment and commercial considerations” article is the most familiar, as it is substantively not so different from what existing trade agreements provide. However, the way the relationship between non-discrimination and commercial consideration is constructed is different from, for example, the GATT Article XVII on state trading enterprise (STE), and has an effect of over-turning a ruling of the WTO Appellate Body. GATT Article XVII.1(b) reads “The provisions of subparagraph (a) of this paragraph shall be understood to require that such enterprises shall, …, make any such purchases or sales solely in accordance with commercial considerations,” where “subparagraph (a)” refers to the non-discrimination obligation. In Canada-Wheat Exports and Grain Imports (2004), the Appellate Body ruled that the two paragraphs must not be read separately. That is, unless the STE engages in discriminatory conduct, it is not relevant to inquire if the STE is acting commercially, subordinating the commercial consideration obligation to non-discrimination obligation.6 No such subordination exists in the TPP SOE discipline. The non-discrimination clause and commercial consideration clause are spelled out separately and independently, with commercial

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6 The Appellate Body opined that “…a panel inquiring whether an STE has acted solely in accordance with commercial considerations must undertake this inquiry with respect to the market(s) in which the STE is alleged to be engaging in discriminatory conduct…The disciplines of Article XVII.1 are aimed at preventing certain types of discriminatory behavior. We see no basis for interpreting that provision as imposing comprehensive competition-law type obligations on STEs, as the United States would have us do.” This ruling overturns a former Panel decision which found violation of commercial consideration obligation to be sufficient to show a violation of the whole Article XVII.1, in Korea-Various Measures on Beef. (WTO, 2012: 274-276)
consideration being set out before non-discrimination.

For designated monopolies (which can simultaneously be an SOE), there is an added obligation preventing DMs from acting anti-competitively. More specifically, designated monopolies should not abuse its monopoly position in the monopolized market to engage in anticompetitive practices in the non-monopolized markets through dealings with their “parent, subsidiaries, or other entities the Party or the designated monopoly” owns.

This indicates that although the SOE chapter has been separated from the Chapter on “Competition,” the rules of non-discrimination and commercial considerations are to be clearly understood in terms of competition principles, rather than merely in terms of “market access.” That is, the purpose of the SOE chapter is partly to capture any anti-competitive behavior that cannot be dealt with through the competition chapter rather than creating any new market liberalizing concessions or setting up a comprehensive code of conduct for SOEs. This may have been further necessitated by the fact that, perhaps in consideration for developing country members, the TPP competition chapter is quite loosely framed, exempt from dispute settlement, and tolerates domestic competition laws which may provide exemptions for SOEs.

2) Non-commercial Assistance

The TPP SOE discipline restricts provision of subsidies that are specific to SOEs. Such SOE specific subsidies are referred to as non-commercial assistance (NCA, hereafter). It means assistance provided to SOEs “by virtue of” that SOE’s government ownership or control. Four criteria are used to determine whether the assistance is “by virtue of” government ownership or control:

i) the assistance is limited only to SOEs
ii) the assistance is predominantly used by SOEs
iii) a disproportionately large amount of assistance is provided to SOEs
iv) SOEs are favored in the provision of assistance.

Assistance means “direct transfer of funds or potential direct transfers of funds or liabilities,” such as:

i) grants or debt forgiveness, loans or loan guarantees or other types of financing
on terms more favorable than those commercially available to that enterprise;

ii) equity capital inconsistent with the usual investment practice of private investors;

iii) goods or services other than general infrastructure on terms more favorable than those commercially available to that enterprise.

The NCA obligation prevents TPP member governments, state enterprises or SOEs from providing NCA to SOEs that cause “adverse effect” or “injury” to trade and investment interests to other TPP member countries. Causality between NCA and these two negative effects need to be “demonstrated.”

Adverse effect means causing displacement or impediment from the market due to NCA. More specifically, such displacement or impediment are said to occur if the market share of the NCA receiving SOE significantly increases, stays constant while it would have declined without the NCA, or falls at a significantly slower rate than it would have without the NCA. With respect to price, adverse effect arises if there is “significant price undercutting” or “significant price suppression, price depression or lost sales.” Price comparisons should be made at the “same level of trade and at comparable times.” Factors affecting prices should be accounted for, and if a direct comparison is difficult, “some other reasonable basis” such as unit values can be used for comparison. Three market locations in which adverse effect can arise are identified:

i) the NCA giving country’s own domestic market, in the case of goods;

ii) the markets of another TPP member for both goods and services;

iii) the markets of a non-TPP member countries, in the case of goods.7

There are two important exceptions to adverse effect obligation. First, it does not apply to domestic services. Second, it does not apply to NCA provided “pursuant to a law enacted or contractual obligations undertaken” before the signing of, or within three years after the signing of the TPP Agreement.

With respect to injury, the obligation applies only to the Party (ie, only to governments, and not to state enterprises or SOEs) as providers of NCA, and to

7 Appendix 17-C(b) specifies that negotiation to extend this obligation to services should start within 5 years after the entry into force of the TPP Agreement.
NCA given specifically to SOEs that are covered investments in another TPP member country. Injury is said to occur when the NCA is provided to the production and sales of an SOE that is covered investments in another Party, where a like good is produced and sold (Art.17.6.4). Injury means “material injury to a domestic industry, threat of material injury to a domestic industry or material retardation of the establishment of such an industry” (Art.17.8.1). Determination of injury is to be made comprehensively, based on “positive evidence,” with respect to, for example, volume of production, the effect on prices, and the effect on the production of domestic industry.

Non-commercial assistance obligation is a new addition to SOE rules that cannot be found in earlier trade agreements containing SOE related provisions. Although this obligation is similar to actionable subsidies in the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement, hereafter), there are significant departures on two accounts. First, unlike the SCM Agreement which regulates subsidies provided by the government or public bodies to mostly private enterprises, NCA is specifically about subsidies provided both by the government and state enterprises or SOEs, to only SOEs. Second, unlike the SCM Agreement which only applies to goods, the NCA obligation is extended to services and investment.

Further, in contrast to the SCM Agreement which specifies three criteria, existence of financial contribution, economic benefit, and specificity, the TPP does not require the examination of whether any economic benefit has been actually conferred. The presumption is inherent in the definition of “non-commercial assistance,” which assumes that the assistance given to SOEs means advantages that are not commercially available in the market.

Otherwise, the NCA obligation of the TPP SOE regime adopts many concepts, terminology and criteria used in the WTO SCM Agreement. For example, the four criteria to measure specificity of assistance to SOEs are similar to the criteria to determine specificity of subsidy in the WTO SCM Agreement. The

8 It should be noted that due to Article 1.1(a)(1)(iv), the SCM Agreement includes under its discipline indirect subsidy through private entities which government and public bodies have “entrusted” or “directed” to undertake government mandates.

9 Regulation of SOE specific subsidies is not entirely new. For example, the Section 10.2 of China’s Accession Protocol to the WTO Agreement directly targets subsidies to SOEs by
concepts of adverse effect and injury are also borrowed from the WTO SCM Agreement, although they are constructed differently in the TPP. In the TPP SOE Chapter, adverse effect and injury are provided in separate paragraphs, with different scope of application. In the case of adverse effect, two different modes of supplying service by the NCA receiving SOEs to a foreign market are identified:

i) the supply of a service by the SOE from the NCA giving country to another TPP Party (ie, cross border supply);

ii) the supply of a service in the territory of another TPP country through an enterprise that is a covered investment in that TPP country or a third TPP country.

What the second mode of supply exactly means is not obvious, and would need some clarification. According to the current wording, the service is supplied not directly by the NCA receiving SOE, but through an “enterprise” that is a covered investment. According to the TPP Agreement definitions, an enterprise can either be privately or governmentally owned, and in the case of cross-border supply of services, includes branches. It is difficult to envision what exact form of supply the second mode would entail. Does it refer to arm’s length transaction between the NCA receiving SOE and the “enterprise”? Does it involve equity participation of the SOE in the enterprise, or merely setting up a branch? What kind of relationship between the two entities would allow benefits the SOE gets from the NCA to pass-through to the “enterprise”?

Whatever the answer to these questions may be, the presumption here is that the adverse effect can be “indirectly” attributed to NCA provided to an SOE even if the service is actually delivered by another entity (which can be a private enterprise) that did not directly receive the subsidy, without a pass-through analysis.\(^\text{10}\) The NCA obligation also covers “indirect” NCA on the giving side, viewing “…as specific, if inter alia, state-owned enterprises are the predominant recipients of such subsidies or state-owned enterprises receive disproportionately large amounts of such subsidies.” This obligation is certainly disadvantageous for China where specific markets may consist predominantly of SOEs. For a critique, see Qin (2004).

\(^{10}\) Determining whether such “indirect subsidy” exists is not a straightforward matter. Two situations of indirect subsidization where benefit of a subsidy is transferred from the entity that is the original recipient of the subsidy to an entity that is supplying the product (or in this case services)
Indirect provision occurs when the government “entrusts or directs an enterprise that is not a state owned enterprise” to provide subsidies to SOEs (footnote 18). Therefore, the NCA obligation is extended to private entities involved with NCA receiving SOE.

Matters are simpler for injury, which only applies to commercial presence, that is, when SOEs that are themselves covered investments in another TPP country and to the production and sale of a good by that investing SOE. In the WTO SCM Agreement, “injury to the domestic industry” constitutes one of the categories of adverse effect, along with “nullification or impairment of benefits accruing directly or indirectly to other members under GATT 1994…” and “serious prejudice to the interests of another member.” Of the serious prejudice, the TPP SOE only incorporates displacement and impediment from the market, and not the four others which are currently ineffective.11

Specification of SOEs as providers of assistance to other SOEs has been clearly motivated by recent trade disputes between the US and China in which the US was unable to convince the Appellate Body that a Chinese SOE was a “public body” in the sense of the SCM Agreement Article 1.1a(1). In US-Anti-Dumping and Countervailing Duties (China), the Appellate Body reversed the Panel’s finding that the term public body means “any entity controlled by a government” and instead found that it covers only those entities that possess, exercise or are vested with governmental authority: “…the mere fact that a government is the majority shareholder of an entity does not demonstrate that a government exercises meaningful control over the conduct of the entity, much less that the government has bestowed it with governmental authority.”12 By specifying that the government without explicit government delegation or command can be identified: when the upstream supplier uses subsidized downstream inputs, and when the original subsidy receiving SOE has been privatized. Qin (2004: 880) notes that according to WTO jurisprudence, if the two entities are unrelated, a pass-through analysis is required, and that when an SOE is completely privatized at arm’s length and for fair market value, there is a rebuttable presumption that the benefit from the original subsidy ceases to exist. On this issue, also see Shadikodjaev (2012).

11 The four other situations where serious prejudice are “deemed to exist” are ad valorem subsidization of a product exceeding 5%, subsidies covering operating losses sustained by an industry or an enterprise, and direct forgiveness of debt.

12 WTO Analytical Index (2012: 1025-1026). For a critique of Appellate Body’s judgement, see Cartland et al. (2012). For a comprehensive discussion on this problem of “public body” with
as well as SOEs and state enterprises are all subject to the obligation as providers of NCA, the TPP simply does away with the controversial issue of having to determine whether SOEs and state owned commercial banks are public bodies, as was required in the SCM Agreement. Although, of course, one can still quarrel about whether an entity under issue should be considered an SOE or not, the TPP Agreement seems to have by far the clearest definition of SOE than any other trade agreements: and as discussed above, that definition is based on ownership and control which US had argued for in the WTO disputes.

Since the TPP Agreement does not contain a separate discipline on subsidies to private enterprises, the NCA obligation creates a decidedly uneven playground against SOEs. Presumably, adverse or injurious effects of subsidies to private enterprises can be countervailable under the WTO SCM Agreement as TPP members retain their rights and obligations under the SCM Agreement. However, since the SCM Agreement does not exclude SOEs from its discipline, different conclusions are likely to be obtained in the TPP compared to that of the WTO as far as treatment of SOEs are concerned. This could result in a serious challenge to the multilateral trade regime. Further, as in the countervailing duty cases of the SCM Agreement, issues as to what constitutes non-commercial assistance and determining adverse effect or injury are expected to be contentious. The success of this discipline will therefore depend on how judiciously the panel under the dispute settlement handles these issues.

3) Transparency

The TPP SOE discipline contains extensive transparency rules. Each Party is required to provide to the other Parties or make publicly available a list of its SOEs and DMs (including an expansion of the scope of an existing monopoly and its designation) (Art.17.10.1–2). Upon request, a Party should provide following information regarding SOEs and government monopoly (ie, not private designated monopoly), provided the activities of such entities affect trade or investment respect to China, see Ding (2014). Lee (2015) also provides an insightful commentary on how the WTO decisions may be “misinterpreting” the definition of state organs in the International Law Commission Draft Articles on Responsibility of State for Internationally Wrongful Acts. For a general analysis of China’s experience in WTO dispute settlement see Chi (2012), and more specifically regarding countervailing duty cases against China, see Ahn and Lee (2011).
between the Parties. Noticeably, in addition to general information, the information that should be provided concern governance mechanisms that gives special rights to the state or other share-holding state-related enterprises:

i) the percentage of shares that the Party, its SOEs or designated monopolies cumulatively own, and percentages of votes that they cumulatively hold;

ii) a description of any special shares or special voting rights or other rights that the Party, its SOEs or designated monopolies hold, to the extent the rights are different than the rights attached to common shares;

iii) the titles of any government officials serving as an officer or member of the entity’s board of directors;

iv) annual revenue and total assets over the most recent 3-year period for which information is available;

v) any exemptions and immunities from which the entity benefits under the law;

vi) any other information that are publicly available, such as annual financial reports and third-party audits.

A 5-year transition period is allowed for developing members of the TPP such as Brunei Darussalam, Vietnam and Malaysia with respect to these transparency rules. Upon request, detailed explanation of any policy or programs for the provision of NCA should be provided, as long as the policy or programs affect trade and investment between the Parties. The response should contain the form of the NCA, the names of government agencies, SOEs or SEs providing the NCA, names of SOEs that receive or are eligible, the legal basis and policy objectives, the amount or amount budgeted for the NCA, the amount of loans (loan guarantees, interest rates, and fees charged), price charged if any, as well as amount and characteristics of investment.

These transparency rules are quite extensive and detailed, going further than the US-Singapore FTA, which contains the most onerous transparency rule for (non-US) SOEs so far. The US has a history of emphasizing transparency in order to discipline subsidies. In the WTO DDA Rules negotiation, the US has repeatedly proposed strengthening transparency rules through for example, setting deadlines to respond to questions posed by other members. In particular, the US has strongly complained against lack of or incomplete notification by
such Members as China and India, under the transparency obligation. US has even made over 300 counter notifications on Chinese subsidies by 2014 (USTR and US Department of Commerce, 2015: 9~22).

The TPP SOE transparency rules would be particularly burdensome for developing members of the TPP, although transition period has been granted for them. The rules would also be difficult to comply by those SOEs which undertake a variety of commercial and non-commercial activities where budget and accounting are not completely clear cut.

While transparency is a key element in enforcing the SOE discipline by enabling monitoring, given the disastrous experience with respect to the STE reporting mechanism, and less than satisfactory compliance under the notification obligation of the SCM, it is not clear how well this would work outside of the dispute settlement mechanism which contains stringent obligation to cooperate with information gathering (see Section II.3, below).

3. Other Rules

The SOE chapter is subject to dispute settlement, and has an interesting feature regarding the information gathering process. In the TPP SOE discipline, a greater transparency mechanism is set to operate once the dispute settlement process begins with respect to alleged claims of violation of “non-discriminatory-treatment and commercial considerations” and “non-commercial assistance” obligations. A particular information developing process is to be used as set out in Annex 17-B which works to enforce information disclosure through time limits and obligations to respond. In particular, the tribunal “should draw adverse inference from instances of non-cooperation by a disputing Party in information-gathering process” (paragraph 9) and “the tribunal shall not request additional information to complete the record where the information would support a Party’s position and the absence of that information in the record is the result of that Party’s non-cooperation in the information-gathering process.” Such detailed and forceful mechanisms for information gathering and exchange cannot be found in the earlier generation of competition chapters containing SOE provisions. Clearly, the concern is that it is difficult to elicit information from state-controlled entities, which in some countries may be exempt from disclosure rules normally applicable to commercial entities, and that in some cases, involved firms may refrain from divulging information...
about SOEs, if repercussions from host states are expected.

A case in point is China-Electric Payment Service (DS413, 2012), a case where China Union Pay (CUP) allegedly held exclusive market rights for electronic payment services for transactions in Renminbi. US argued that this violated China’s national treatment and market access obligations under the GATS, but the WTO panel rejected the claim that CUP represents an across-the board monopoly supplier, due to a lack of evidence. Some have complained that because of the close relationship between the CUP (which can be considered to be an SOE) and the Chinese government, multinational corporations were reluctant to actively cooperate with the USTR, fearing retaliation from the Chinese market. It is alleged that VISA, one of the main informant to the USTR, saw some of its business activities blocked during the dispute process (Kowalski et al., 2013: 36).

The USTR categorically rules out the possibility of an Investor-State Dispute being initiated on the grounds of violating the SOE Chapter (USTR, 2015). It is however possible that state enterprises, when undertaking government mandate, can be subject to Investor-State Dispute, on the grounds of violating obligations under the Investment Chapter.

Another rule concerning claims that can be made against a foreign SOE is Article 17.5 on “Courts and Administrative Bodies” which specifies that each Party “shall provide its courts with jurisdiction over civil claims against an enterprise owned or controlled through ownership interests by a foreign country based on a commercial activity carried on in its territory,” as long as such jurisdiction cover claims against domestically owned enterprises. It is made clear through a footnote that the jurisdiction need not be limited to civil claims only, indicating that criminal claims is possible. In the words of the USTR (2015), this would ensure that “SOEs cannot evade legal action regarding its commercial activity merely by claiming sovereign immunity.” Sovereign immunity, especially regarding SOEs, is far from a settled issue in the international arena, although currently dominant doctrine seems to be “restricted immunity” for commercial, private or non-governmental acts. This would again, clash with China’s view, which holds on to the “absolute immunity doctrine.”

Challenging situations can arise when domestic courts reach decisions that conflict with rulings by international bodies in trade disputes regarding the same

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13 For greater detail on this issue, see Aaken (2013).
act of state. For example in a private anti-trust case against the vitamin C export cartel, a US district court did not accept foreign sovereign compulsion defense by Chinese enterprises, despite the amicus curie submitted by the Chinese government acknowledging that minimum export price requirements were compelled through trade associations controlled by the government. At the same time, in a WTO dispute, US had charged China with imposing export restraints of various raw materials, by coordinating minimum export price requirements through government controlled trade associations. The US presented Chinese government’s amicus curie in the vitamin C case as one of its evidence, and the Panel ruled in favor of the US.14 Instead of providing a mechanism to facilitate coordination between domestic courts and international trade bodies, Article 17.5 of the TPP SOE regime leaves the possibility wide open to similarly conflicting situations where domestic court decision on commercial activities of SOEs as private enterprises could conflict with a WTO dispute proceeding, where the status of SOEs could be ruled either public or private, as we saw in the preceding discussion. Again, there is a potential for this TPP SOE provision to undermine multilateral dispute settlement mechanism. Some scholars argue that one possible solution to this problem would be to adopt a principle of domestic courts deferring to international proceedings in a situation similar to the vitamin C case.15

14 There were two other similar private anti-trust cases against Chinese export cartels in the US, both reaching different conclusions regarding foreign state compulsion defense in relation to the WTO dispute than in the vitamin C case. See Martyniszyn (2012). The related WTO dispute is China-Measures Related to Exportation of Various Raw Materials (DS349, 2009-2012). Although, the Appellate Body ruled the Panel’s decision regarding minimum export price requirement to be legally ineffective, this was not based on substantive facts of the case but on legal technicalities. Panel and Appellate Body reports are available at https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds394_e.htm. The author would like to thank an anonymous reviewer who drew the author’s attention to the private antitrust cases in the US. These cases embody complex issues touching upon sovereign immunity, extra-territorial enforcement of export cartels, and the interface between competition policy and trade policy. These are important issues of relevance to our discussion of the TPP SOE regime that need to be addressed, but dealing fully with all of these complex issues goes beyond the scope of the present paper.

15 For detailed discussions on this, see Wang (2012) and Lee (2010).
4. Exceptions

The SOE regime does not apply to regulatory or supervisory activities, conduct of monetary and related credit policy and exchange rate policy by a central bank or monetary authority, as well as exercise of regulatory or supervisory authority over financial services suppliers (Art.17.2.2~3). Activities of SOEs or state enterprises to resolve a failing or failed financial institution or an “enterprise principally engaged in the supply of financial services” are also beyond the scope of the TPP SOE regime (Art.17.2.4). In addition, the rules do not apply to sovereign wealth fund and independent pensions, except for the non-commercial assistance obligation (Art.17.2.5~6).

Certain allowance is made for financial services supplied by SOEs to support export or import. For example, the “non-discriminatory treatment and commercial considerations” obligation does not apply to financial services by an SOE pursuant to a government mandate if this supports exports, imports, or foreign investment, as long as it is not intended to displace commercial financing nor offered on terms more favorable than market conditions, or if the offer is consistent with the terms and scope of the OECD’s Arrangement on Officially Supported Export Credits (Art.17.13.2).

Further, under similar conditions, if the SOE supplies such financial services through local presence in another Party, non-commercial assistance shall not be deemed to adversely affect hosting Party’s domestic financial industry (Art.17.13.3). Similarly, adverse effects are assumed not to arise when SOEs assume temporary ownership over enterprises located outside of the Party, as a result of default associated with such financial services. The condition here is that the non-commercial assistance to the temporarily owned enterprise is to recoup the SOE’s investment in accordance with restructuring or liquidation plan (Art.17.13.3).

Non-discriminatory treatment and commercial considerations or non-commercial assistance obligations do not prevent Parties from implementing temporary measures to deal with national or global economic emergency, including temporary measures with respect to SOEs for the duration of the emergency (Art.17.13.1).

The TPP rules are targeted at commercial activities of SOEs and contain explicit exceptions for SOE’s public activities. For example, SOEs are not prevented from providing goods or services exclusively to the government for the purposes
of carrying out governmental functions. Further, the three major obligations (non-discriminatory treatment and commercial assistance, non-commercial assistance, and transparency) do not apply to services supplied in the exercise of governmental authority in the sense of GATS (Art.17.2.10).

More specifically, the non-discriminatory treatment and commercial considerations obligation do not apply to purchases and sales of goods or services of SOEs or designated monopolies in case of any existing non-conforming measures with regards to Investment, Cross-border Services and Financial Services chapters (Art.17.2.11). That is, these SOE obligations apply to the already liberalized services sectors only.

The commercial considerations obligation does not apply to an SOE’s purchase or sale of a good or service to fulfill any terms of its public service mandate. Similarly, the commercial considerations obligation does not apply to a designated monopoly if its purchase or sales of the monopoly good or service is to fulfill the terms of its designation. However, SOEs and designated monopolies must carry out these actions in a non-discriminatory manner (Art.17.4.1~2). Further, SOEs are exempt from TPP SOE obligations when exercising delegated governmental authorities. But again, SOEs are required to carry out these activities “in a manner that is not inconsistent” with obligations of the Agreement (Art.17.3). Examples of delegated authority include “the power to expropriate, grant licenses, approve commercial transactions, or impose quotas, fees or other charges.” Services supplied by an SOE within its own domestic market “shall be deemed to not cause adverse effects,” except in the case where that service itself is a form of non-commercial assistance (Art.17.6.4 and footnote 21).

These requirements put SOEs in a spotlight: it cannot get away pretending to be a “public body” in the commercial world, nor can it get away pretending to be purely acting on commercial considerations when carrying out public actions on behalf of the government, and must take up full contractual responsibility on either front as a commercial entity or as the government. In many ways, the TPP SOE regime is an effort to discipline the slippery, amphibian character of SOEs, which carry out both commercial and publicly mandated activities.

III. SOES AND COMPETITIVE NEUTRALITY

State presence in the market place has receded during the 1980s throughout the
industrialized countries, with a shift to liberal market policies emphasizing privatization and deregulation. The policy shift was joined by the former Eastern Bloc and developing countries in the 1990s. Nevertheless, presence of the public sector is still significant in many countries, particularly in the less industrialized countries. In many cases, privatization of state owned enterprises (SOEs) remain partial or incomplete. This has created mixed markets in which SOEs and private enterprises are competing in the same market.

If SOEs receive preferential treatments from the government which owns them, this may give SOEs competitive advantages against private enterprises. This potentially leads to market distortions, in terms of both efficiency and equity. Such distortions which arise when SOEs and private enterprises compete are now known as “competitive neutrality (CN)” problems. At the level of international trade, such CN problems can cause trade friction. A number of SOE-related trade disputes between China and the US attest to such concerns of the international trade community.

As UNCTAD (2014) observes, many developing countries, including countries such as China and Vietnam, active use of SOEs for specific government policies, especially industrial policy in strategic sectors, afford preferential treatment to SOEs. Despite the recognition that abiding by the CN principles will bring benefits in the long run, it is not a policy priority in most developing countries wishing to rapidly catch up. This stance is increasingly being challenged by developed countries which fear that government backed SOEs will create unfair and uneven playground against their private enterprises in international transactions. Such fear is well demonstrated by the US, which has already filed 28 countervailing cases against China by the end of 2014. These cases involve industries ranging from steel, aluminum products, textiles, paper, various chemicals, wood, and non-ferrous metals to new energy technology industries among others. (USTR and US Department of Commerce, 2015: 12). Thus, incorporating the CN principle into trade negotiations has become a key issue.

Until now it has been customary to frame the rules on SOEs in trade agreements within the competition chapter. In doing so, no general principle regarding why we need special rules regarding commercial activities of SOEs has been provided. This has changed in the TPP. The TPP SOE rules adopt some of the same disciplines available in existing free trade agreements but in establishing a separate chapter on SOEs apart from the competition chapter, it seems to have
adopted the competitive neutrality principle as its underlying, general “theoretical” framework, although it does not explicitly mention the term competitive neutrality in the text.

Overall, the TPP SOE obligations closely reflect what may be recommended under competitive neutrality principles. The concept of competitive neutrality originates from an Australian experiment to discipline the SOEs and has been developed most extensively in the OECD with respect to public sector reform discussions. The term “competitive neutrality” was first coined by the Hilmer Review (Hilmer et al., 1993), the document issued by an independent committee which set out principles for comprehensive competition reforms in Australia during the early 1990s. In the Australian context, competitive neutrality refers to a very specific situation where government owned public enterprises are in competition with private business. Therefore, competitive neutrality concerns the commercial activities of government enterprises rather than the government enterprise as a whole. Consequently, the Hilmer Review specifically rules out “non-business, non-profit” activities of SOEs from being subject to competitive neutrality regulations.

The Hilmer Review clearly distinguishes nature of competitive neutrality between private entities and that between public and private entities. The Review argues that in the former case, discrimination generally arises from deliberate and transparent policy actions through legislations (e.g., entry restrictions, regulations regarding permissible market conduct) and therefore can be resolved through regulatory review processes, which in turn can be dealt with within the traditional realm of competition advocacy.\(^{16}\) The competitive neutrality between public and private enterprises however, was seen to involve distortions fundamentally arising from incomplete reforms of the government business, which may still retain bureaucratic or monopolistic characteristics in parts of its commercial activities, requiring extra regulation beyond ordinary competition law and advocacy. Thus, the writers of the Hilmer Review clearly viewed ordinary competition law, which

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\(^{16}\) Competition advocacy refers to any competition promoting activities besides the enforcement of competition law that is undertaken by the competition agency. It is often difficult to directly enforce competition law against other Ministries or regulatory bodies pursuing legitimate social goals, and anti-competitive behavior created by these bodies needs to be restrained through such advocacy tools as persuasion, consultation and recommendation (Yun, 2013).
mainly regulates the competition processes between private enterprises, to be inadequate in dealing with competitive neutrality problems arising from competition between government owned business and private business.\textsuperscript{17}

The Hilmer Review specifies that CN applies to the case where competitive advantage arises purely from the status of being state owned, and not from any other firm characteristics such as size, expertise, efficiency or managerial competence. The intention of CN regulation is not to put every firm on a completely equal footing, but simply to eliminate the “undue,” additional advantages that accrue merely from the status of being government owned (eg, outright subsidies or exemptions from certain requirements, ability to borrow from the government budget, public perception that its debt would be guaranteed by the government).

It is important to note that the Hilmer Review presents neutrality in “net” terms. While government business was seen to enjoy many competitive advantages over private business, it was recognized that government business may suffer from certain disadvantages, such as the obligation to provide public service obligations, sometimes at below market price, or restrictions against diversifying into other business areas. It is argued that non-commercial activities of the public entity should be fully taken into account and compensated for, and that such disadvantages of the government business ought to be deducted from the competitive advantages they enjoy.

Competitive neutrality reforms do not require reducing the size of the public sector per se, nor require privatization or commercialization of in-house provision of goods and services, nor removing community service obligations of government business. Neither is competitive neutrality built upon the assumption that government business could not inherently be as competitive as private business. The single most important emphasis of competitive neutrality is that when publicly owned entities do choose to adopt commercial principles, then they ought to compete on the same basis as private firms, under “neutral” competitive environment where neither party has competitive advantages or disadvantages due to their ownership status.

Nevertheless, to the extent that CN problems are mainly seen to arise from incomplete reforms of SOE governance, CN regulations should ultimately be

\textsuperscript{17} Australia has instituted an explicit, separate competitive neutrality regulatory system. Most other countries enforce competitive neutrality related issues through their competition laws. For more information on national practices, see OECD (2012a: 13-22).
seen as moves to complement and to further facilitate the continuation of the pro-market public sector reforms of the 1980s and 1990s. The OECD support for competitive neutrality policies is also strongly based on the perceived positive benefits of pro-market public sector reforms. 18 The OECD (2012c) recommends that structural separation of commercial and non-commercial activities would be the key in running the commercial activities according to market principles. It also recommends that corporatizing commercial activities would help to ensure exposure to competition, transparency and accountability. Accurate cost identification is essential so as not to under or over compensate costs of public service obligations, as this would remove any cost advantage or disadvantage that could arise due to public ownership.

Further, forcing SOEs to achieve commercial rate of return would prevent cross-subsidizing between commercial and non-commercial activities, and enable comparison of their performance to similar business activities in the same industry. Tax, finance, and regulation are particular sectors where SOEs might enjoy advantages from public ownership, and therefore special attention is needed to ensure neutrality in these fields. Public procurement is another area where competitive, non-discriminatory and high transparency should be upheld to be consistent with competitive neutrality. OECD recommends that general procurement rules should apply to SOEs, with clear selection criteria set forth in advance. Where discriminatory preferences exist, they should be made transparent in the selection criteria and be shared with potential bidders in advance.

The above OECD recommendations show that often competitive neutrality distortions arise from weak corporate governance of SOEs such as soft budget constraint, lack of accountability, and protection from bankruptcy. OECD therefore

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18 The OECD defines competitive neutrality as a situation where “no entity operating in an economic market is subject to undue competitive advantage or disadvantage.” (OECD, 2012b: 15). This is a much neutralized definition, void of any reference to SOEs and failing to distinguish the subtle difference between competition between private parties versus competition between a private party and an SOE, which has been the root cause for articulating a separate competitive neutrality regulatory mechanism. Viraten and Valkam (2009), which is a rare attempt to further conceptualize competitive neutrality, likewise widens the definition to include many different market actors, or involving discrimination between actual and potential competition, or between different regions. However, OECD’s policy recommendation arising from CN analysis are basically those regarding public sector reform, so that it is safe to assume that OECD’s take on CN is fundamentally not different from what has been set out by the Hilmer Review.
emphasizes that competitive neutrality is part and parcel of sound corporate governance mechanism for SOEs, much of which depends on its relationship with governments as their owners.

The Chapter 1 of OECD Guidelines on Corporate Governance of State Owned Enterprises is effectively a competitive neutrality requirement. It states that “The legal and regulatory framework for state-owned enterprises should ensure a level-playing field in markets where state-owned enterprises and private sector companies compete in order to avoid market distortions. The framework should build on, and be fully compatible with, the OECD Principles of Corporate Governance.” The six sub-clauses of this chapter is compatible with areas of neutrality calling for particular attention to such aspects as transparency, legal and regulatory neutrality, financial access neutrality, debt neutrality, along with separation of government function as a regulator versus player in the market (as in the newly deregulated or partially privatized network industries, or in carrying out other state functions such as industrial policy). Conflation of “ownership function” and “state function” may hinder optimal management, resulting in too passive management of the SOEs or excessive intervention, without due consideration for objective, commercial interest of the SOE. It is argued that a separation of state function and ownership function will enhance transparency in defining objectives and monitoring performance.

Even though the TPP SOE regime is not a full code of conduct (or a manual of corporate governance) for SOEs, it closely reflects the competitive neutrality principle. As set out in its definition of SOEs and scope of application, the TPP Agreement does not prevent setting up of SOEs or DMs, nor deny the value of public services these organizations provide, but aims to create a “neutral” competitive environment between commercial activities of SOEs and private enterprises in situations where it could be marred, through for example discriminatory treatment and non-commercial assistance. Further, the TPP Agreement does not condemn subsidies to SOEs per se, but seeks to redress, if at all, the harmful effects on foreign competitors, of such subsidies that are only available due to their special position as SOEs and not generally available in the market. Regulatory neutrality is also ensured by the article on administrative bodies. However, the non-discrimination obligation of the TPP should be viewed as the traditional national treatment and MFN clause to prevent discrimination based on nationality rather than discrimination on the grounds of competitive neutrality.

The TPP SOE regime explicitly outlaws cross-subsidization between designated
monopoly market and non-monopoly market for designated monopolies. At the same time, the commercial consideration clause basically forces SOEs to behave just like private enterprises in their buying and selling activities. The TPP does not require separation of commercial and non-commercial activities nor force SOEs to adopt specific accounting procedures to enforce transparent cost identification. However, to meet detailed transparency obligations, SOEs basically need to have sound corporate governance enabling separate accounting of commercial and non-commercial activities, cost identification, flows of direct and indirect subsidies and so on.

It cannot be said the “net” concept has been translated very well into the TPP SOE rules. While the TPP SOE discipline applies only to commercial activities of the SOE and public functions such as “public service mandate” and regulatory or monitoring activities are exempt from SOE obligations, there are no specific compensating mechanism for disadvantages SOEs may suffer in commercial activities due to its onerous public obligations and limitations on commercial strategies it can pursue, especially if it is fundamentally difficult to completely separate the budget or accounting of the two kinds of activities. This difficulty would naturally force TPP countries to reform their SOEs to structurally separate commercial activities from public functions, so as not to become disadvantaged in competing with private enterprises in commercial markets. In this way, the new SOE discipline implicitly disadvantages SOEs and encourages pro-market public sector reforms, although it does not explicitly prevent setting up or operating SOEs per se.

Nevertheless, the TPP Agreement does make exceptions for SOE’s public good services such as public mandates, domestic and global economic crisis, financial prudence and monitoring activities. The rules also apply only to those SOEs above a certain size, measured by revenue from commercial activities. Due to a separate chapter on government procurement, government procurement, including SOE’s supply of goods and services for governmental purposes are not covered by TPP SOE obligations.

As for other neutralities relating to financial aspects such as tax neutrality, debt neutrality and direct subsidies, they are embodied in the non-commercial assistance obligation. This NCA provision is what is really new in the way of disciplining the SOEs and therefore the most significant. Of course, the subject of regulation in the TPP agreement is their “adverse effect (injury)” on private competitors (industry) of other TPP member countries, rather than elimination of such subsidies per se.
IV. RELEVANCE TO SERVICES SUBSIDY NEGOTIATIONS IN OTHER FORA

Since many prominent SOEs operate in various services sectors, it is significant that the NCA obligation brings subsidies regime to services. No comprehensive international trade rules governing services subsidies exist to date. However, current GATS rules are not completely devoid of subsidy measures affecting trade in services. For example, GATS Article II (MFN treatment) applies to services subsidies, if measures by Members affect trade in services. Further, subsidies must be granted on a national treatment basis unless limitations have been specified in a Member’s schedule of commitments (GATS Article XVII: NT). GATS Article VIII (Monopolies and Exclusive Suppliers) and Article IX (Business Practices) also bear some relevance to subsidy insofar as they “draw attention to the role of government ownership and regulation in generating effects similar to trade-distorting subsidies” (Sauve and Sopranz, 2015: 6). Not only can subsidies be subject to non-violation complaints, GATS Article XV:2 allows Members to request consultations when it considers that it is “adversely affected by a subsidy of another Member” and such requests “shall be accorded sympathetic consideration.”

In addition, services subsidy is one of the built-in agendas of the GATS. Although no time-limit has been specified, GATS Article XV calls for WTO members to enter into negotiation on extending the rules to subsidies, and for that purpose, Members “shall exchange information concerning all subsidies related to trade in services that they provide to their domestic service suppliers.” GATS Negotiating Guidelines even states that WTO members “shall aim to complete” negotiation on services subsidies prior to the conclusion of negotiations on

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19 Using 50.01% government ownership as the definition, Kowalski et al. (2013) identifies 204 SOEs out of world’s 2000 largest publicly listed firms. These firms are deemed to be SOEs that are most actively engaged in international trade and investment. Overall SOE shares were highest in natural resource extraction and construction. While OECD contribution to sectoral shares was generally small, they were highest in provision of energy, tobacco manufacturing, warehousing, automobile manufacturing, and financial intermediation. BRICS countries had higher SOE shares in general, and they were highly represented in natural resources and manufacturing sectors, as well as financial intermediation, telecommunication, and air transport. (Kowalski et al., 2013: 26-27).
specific commitments (WTO, 2001). The slow pace of DDA negotiations, however, has led to pessimistic views as to the possibility of concluding negotiations for new rules on services subsidies.

The greatest task in the GATS negotiation seems to be striking a proper balance between disciplining the trade distortive subsidies versus retaining policy spaces to pursue public policy objectives. As Sauve and Soprana (2015) note, there is a particular concern regarding how to treat certain kinds of subsidies, the primary purpose of which is not to create trade advantages but to pursue legitimate social goals (eg education), or to correct market failures (eg. lowering transaction or information costs when entering new markets), which nevertheless may result in adverse effects to foreign suppliers.

Indeed, some of the FTAs contain a roll back from GATS obligations, and to a considerable extent these relate to subsidies. Adlung (2015) shows that in a number of regional trade agreements more generous national-treatment exemptions for subsidies prevail, regarding limitations scheduled on a horizontal basis, and in the case of sectors, for those sectors such as education and health. Such GATS-minus provisions may have been motivated by the desire to retain “policy space” even by developed countries. Since many of the parties to these trade agreements also belong to the multilateral TISA negotiation initiated in 2013, one cannot rule out the possibility that such GATS-minus provisions would also find their way into TISA.

However, to the extent the issue of SOEs in services significantly caused frustration in the GATS DDA negotiations, it is highly likely that TISA would opt for a strengthened discipline on subsidies to services supplied by SOEs, now that TPP SOE discipline has been negotiated and can serve as a model. Except for Brunei Darussalam, Malaysia, Singapore and Viet Nam, all the members of the TPP are also negotiating in the TISA, and will have little resistance to accepting the level of TPP SOE obligations. On top of this, China, which may have the greatest reservation against any SOE discipline, has been so far deterred from entering TISA negotiations. The details of TISA are not yet officially released. The core text of April 2015 leaked by Wikileaks in 2015 does not yet contain new and enhanced disciplines, but does hold a space for subsidies. Given these indications, it is very likely that TISA will incorporate subsidy discipline specific to SOEs, and if that is indeed the case, one can expect that TPP SOE discipline would serve as a role model.
Of course, given the fundamental difference between the nature of goods trade and services trade, there would still be more general issues to be sorted out, such as definition of subsidy and its coverage. Although the TPP SOE regime modifies and reconstructs existing rules for goods to fit services subsidy, much of its non-commercial subsidy discipline borrows from the SCM agreement designed for trade in goods. Further, exempting domestic services from major obligations in respect of concerns by some TPP members may not be guaranteed in the TISA.

V. CONCLUSION

Free trade agreements are premised upon market principles, and state actors involved in commerce or international trade have always been an aberration to the system. The rules of the current trade regime such as the WTO does not seem to be very well equipped to deal with state owned enterprises undertaking commercial activities in “free market” situations. Nevertheless, the WTO has accommodated state enterprises and trade with non-market economies through, for example adopting the rules on state trading enterprises and introducing adjustments in the anti-dumping and subsidies agreements. In so doing, the WTO has taken on what Qin (2004) calls “market structure-based view” rather than an “ownership-based view.” It is argued that what matters to the world trade system is not state ownership per se, but the market structure that allows state enterprises to entertain special rights and monopolies which may impair liberalization commitments agreed upon. To the extent such special rights and monopolies are bestowed upon private parties, the resulting problems would not be fundamentally different from those emanating from state owned entities.

The competitive neutrality concept on which the TPP SOE regime is primarily based, takes on a different approach, by adopting the “ownership-based view.” Here, the state ownership itself matters. Weak corporate governance in state owned enterprises are prone to harming neutral environment for competition, creating market distortions with respect to both efficiency and equity. However, little theorizing has been done with respect to competitive neutrality. The concept has primarily developed among policy circles. Academic works supporting this proposition are difficult to come by, although Sappington and Sidak (2003) and Sokol (2009) are representative in this line of thought. Sappington and Sidak (2003) show that particular corporate governance characteristics that are said to
be common among SOEs (eg. soft budget constraint, protection from bankruptcy, pursuit of multiple goals other than profit maximization such as scale expansion, statutory monopoly) make them compete more aggressively to expand scale compared to private enterprises which just maximize profits. This makes them more prone to anti-competitive behavior such as predatory pricing, raising rival’s costs and cross-subsidization between monopoly and non-monopoly sectors. They therefore recommend that for SOEs, price floor should be set higher, at levels higher than cost measures that set the floor for a profit-maximizing firm. However, Sokol (2009) argues, based on a cross-country empirical analysis, that antitrust efforts to curb predatory pricing of SOEs have been ineffective, due to difficulties in quantifying advantages and disadvantages arising from SOE status. He therefore argues that strengthening SOE corporate governance can be a substitute to competition law enforcement against SOEs. However, literature on this issue is quite limited, and more vigorous empirical analysis would be necessary before one can feel comfortable about singling out SOEs as a group presumed to be especially anti-competitive that needs special regulation. It is not even certain whether SOEs as a group generally have such a great impact on international trade and investment to be singled out. Comprehensive statistics on international activities of SOEs and their economic impact is not readily available. Kowalski et al. (2013) reports that 200 or so SOEs included in world’s top 2000 corporations take up 19% of world export value, and that 90% of these SOEs operate at least one foreign subsidiary. However, these statistics by themselves hardly show clearly the extent of internationalization of SOEs or their impact on the world economy. The international trade community should therefore be cautious about TPP style, stand-alone regime on SOEs.

For sure, rising exports and foreign investment by China, which is still largely dominated by SOEs, have made themselves visible in international trade and investment. China also does not hide its intention of relying on SOEs to be the pillars of its industrial upgrading strategy. It is clear that some of the TPP SOE provisions were written with China in mind, and these rules will certainly pressure

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20 Szamosszegi and Kyle (2011) provides an extensive analysis of the state sector in China. According to this study, SOEs and entities directly controlled by SOEs appear to account for more than 40% of China’s non-agricultural GDP. If contributions of indirectly controlled entities, urban collectives, and public township and village enterprises (TVEs) are included, the portion may rise to approximately 50%. 

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China as they will serve as a model in developing international trade rules governing SOEs in other fora as well. It is true that the TPP SOE regime works against economies with high proportions of SOEs and limits policy space for governments to use SOEs as spearheads of industrial policy. Some of the articles specifically seem to have been motivated by disagreements between the US and China over their trade disputes, and trade disputes between the two necessarily touch upon such fundamental issues as to the nature of state enterprises and subsidies in China, stance regarding state immunities, and even very politically sensitive issues such as censorship. Therefore, it would be difficult to expect that international trade rule-making would be able to successfully accommodate China without further internal structural changes and reform in China.

Although at first glance the TPP SOE provisions seem onerous for China, it may in fact serve to help China carry its state sector reforms to the next level. For example, it may be more reasonable for China than China’s WTO Accession Protocol, which has been criticized on many accounts.\(^{21}\) The Protocol already contains high levels of obligations for SOEs that are comparable to TPP SOE obligations, including non-discrimination and commercial consideration, as well as the requirement that subsidies to Chinese SOEs will be construed to be “specific.” On the other hand, the TPP SOE discipline would apply to all members and therefore not as discriminatory as the China-specific Protocol of the WTO. It also provides various exemptions and exceptions to allow for domestic subsidies, financial prudence, and resolution of failed financial institutions and corporate bankruptcies. These exceptions have been probably incorporated to meet the needs of current members in dealing with the aftermath of recent financial crisis, but they would also serve China well in enhancing its state sector reforms and continued privatization, of which rules in the Protocol may not be so amenable because it precludes exceptions in the SCM Agreement which had been guaranteed to other developing countries and transition economies to deal with privatization and reform.

This has been a preliminary study based upon TPP SOE chapter text which is yet subject to legal scrubbing. The TPP Agreement itself has not come into effect and it is not easy to predict how each obligation contained in the SOE regime will play out, and to what extent it will impact negotiations in other fora, especially

\(^{21}\) On this, see Qin (2004), and Yang (2000).
given the many built-in uncertainties. The main purpose of this paper has not been to gauge the economic effect of the SOE rules or predict the impact it will have on international trade at large. Rather, this paper attempted to evaluate various factors that influenced the formation of a stand-alone regime on SOEs which is a new feature in free trade agreements and the shaping of its specific rules, and based on such an analysis, to raise questions for future exploration. This paper identified three distinct sources of influence: the consolidating effort of the SOE regime as it draws upon various existing obligations scattered around in different trade regimes and strengthening them; the influence of trade disputes between US and China; and the role of competitive neutrality concept serving as the theoretical basis for the TPP SOE regime.

What is certain is that the TPP SOE regime has created an important benchmark on how to think about various cross-cutting issues on international trade related to SOEs, ranging from enforcement of competition policy and state immunities to SOEs to treatment of non-market economies and subsidies in services trade. In particular, we are forced to think hard again about how subsidies should be treated in international trade, and how competition policy against state owned enterprises involved in international trade can be effectively enforced. Since the theoretical foundation of competitive neutrality concept on which the TPP SOE discipline is based, is still weak, improvement of the discipline could only be achieved when these difficult issues are given further theoretical consideration. It is beyond the scope of this paper to give full treatment to the many complex issues of relevance to the SOE regime. Here, it suffices to note that addressing these issues is an urgent task, as it should facilitate bringing stability to the international trade regime, given that the TPP SOE discipline has built in uncertainties and has the potential to challenge the WTO jurisprudence.

**REFERENCES**


The Empirical Evidence on Government Bond Market Integration in East Asia
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This research intends to investigate the progress made in East Asian bond market integration thus far. Price-based measures (AAD indicator and beta-convergence measure), quantity-based measures and econometric techniques (co-integration test, error correction model based Granger causality test) are employed in the analysis. Even though East Asian government bond markets have become more integrated since 2001, the differentials among the markets still remain significantly high. The bond market integration process seems slow. The convergence of bond markets sped up in 2003 and after the 2008 world financial crisis, implying the important role of government policies in integrating the regional bond markets. East Asian bond market integration may need more government-directed measures.

Keywords: Bond Market Integration, East Asia, Beta-convergence, Yield Differential, Intra-regional Investment
JEL classification: G11, G15, E44, F68

I. INTRODUCTION

Since the 1997 Asian financial crisis, bond market development has been the central pillar of financial cooperation in East Asia. Many scholars argue that while individual countries strive to develop the domestic bond markets, it is also necessary to build a regional bond market, where governments, corporates or other institutions can finance themselves through the regional capital pool in a minimum cost (Shimizu, 2007; Rhee, 2003). From the perspective of investors, bond market integration enables them to diversify the country-specific risks through holding a wide range of bonds both inside and outside the country in a very low cost. (Baele et al., 2004). From the perspective of bond issuers, entrepreneurs with little initial
capital or facing credit constraint in small economies can turn to broader capital markets, which implies a strong correlation between the bond market integration and economic growth (Levine, 1997). Less dependency on the long-term borrowing from overseas banks offers East Asia the potential to migrate the double mismatch problem and enhances the region’s resilience to negative external shocks.

To this end, a number of initiatives have been pursued to promote the regional bond market development in East Asia. Asian Bond Markets Initiative (ABMI) in 2003 is the milestone for the regional governments’ cooperation to develop the regional bond market. In the following years, ASEAN+3 economies have continued to move forward through upgrading arrangements, harmonizing institutions and regulations within the region to promote the regional bond market integration. For example, Credit Guarantee and Investment Facility (CGIF) was launched, under the framework of ABMI, to facilitate East Asian corporations to issue local currency denominated bonds by providing credit enhancement in 2010.

Asian Bond Fund is another major initiative to promote regional bond market development. The Executive Meetings of East Asia and Pacific Central Banks (EMEAP) launched the ABF 1 with a capitalization of USD 1 billion in 2003. However, due to its small size, ABF 1 had little effect on the market for dollar-denominated government bonds in East Asia. Later, ABF 2, introduced in 2004 with a capital of USD 2 billion, was implemented to purchase local currency bonds from Asian countries. One of their aims is to increase the demand for the regional bonds by investing in a large pool of US dollar denominated government bonds issued by local governments or organizations in eight EMEAP economies, namely, China, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore, and Thailand.

Furthermore, because the bond markets in East Asian economies are relatively independent due to different regulations and currencies, to build a regional bond market, East Asian countries try to harmonize bond standards and practices at the national levels to encourage more intra-regional issuance and transaction. As a result, ASEAN+3 Bond Market Forum (ABMF) was established under the framework of ABMI to harmonize the market regulations concerning cross-border transactions in September 2010. The ABMF is constituted of two sub-forums. Sub-Forum 1 (SF1) collects and compares bond market regulations in East

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Asia, in the meanwhile, Sub-Forum 2 (SF2) tries to standardize regional transaction procedures and harmonize market regulations.

Despite the numerous benefits bond market integration may bring to East Asia, the potential risks should not be ignored, such as the financial contagion. The financial instability in one country can be transmitted to the neighboring countries quickly. For example, the Asian financial crisis in November 1997 started in Thailand with the collapse of the Thai baht and rapidly swept over Indonesia, Malaysia, Korea and beyond, generating serious impact on the world economy as a whole. Another example is the outbreak of the European debt crisis, which also reveals the potential risks from the financial integration in the Eurozone. The European debt crisis started in Greece at the end of 2009. But because the currency union in Eurozone limits the ability of European leaders to respond to crisis timely, the crisis spreads to Portugal, Ireland, Spain and Italy. Thus, financial integration is gradual process stretching over many years with merits and demerits. Given the various governments’ efforts to promote the regional bond market integration, it is crucial for policymakers to monitor the process of bond market integration and consider how to maximize the benefits of financial integration and meanwhile minimum the risks it brings about. Thus, the progress of bond market integration deserves particular attention and the research on it may give important policy implications.

This analysis intends to gauge the progress made in the bond market integration thus far. The specific research questions are: (1) whether the bond market integration has taken place in East Asia. (2) to what extent the East Asia bond markets have become integrated. (3) at what speed the bond markets have converged? (4) whether the East Asian bond markets have a more closed causal relations with each other and whether there is a leading bond market in East Asia?

This research differs from existing literature in three ways. First, East Asian governments have implemented packages of government measures to integrate regional bond markets since the 1997 Asian financial crisis. The government policies were concentrated during the period of 2003-2004 and in the aftermath of the 2008 world financial crisis. It is necessary for policymakers to obtain timely feedbacks from market and understand the effectiveness of government policies. Consequently, this study makes more detailed research by comparing the bond market integration under four sub-periods (2001-2002, 2003-2006, 2007-2008, 2009-2013), which reveals the effectiveness of government initiatives and the
impact of the 2008 world financial crisis. Second, during the financial integration process, the financial markets in the region may become more correlated with each other. However, the researches on the causal relations between the East Asian bond markets are limited. Even though Calvi (2010) has conducted Granger causality test for ASEAN-5 to find a leading market, his study did not contain all the East Asian economies under the ASEAN+3 framework. This research tries to contribute to the literature by using the Granger causality test to examine the causal relations between the East Asian bond markets. Third, given the massive variation of the economic development across the East Asian economies, country risk is taken into consideration in the analysis of the extent of bond market integration, which may reveal how much discrepancy in bond yields are resulted from the disparity in the economic development in East Asia.

The remainder of this paper is organized as follows. The section 2 reviews the literature on the financial market integration. The section 3 sets out the methodology and describes the data. The section 4 presents the empirical results. The final section concludes and gives some suggestions.

II. LITERATURE REVIEW

Previous literature does not provide a universal definition on financial integration. The most commonly adopted definition of “integrated financial market” is that of Baele et al. (2004) “the market for a given set of financial instruments (services) is fully integrated if all potential market participants with the same relevant characteristics:

(1) They face a single set of rules when they decide to deal with those financial instruments (services);
(2) They have equal access to the above-mentioned set of financial instruments and/or services;
(3) They are treated equally when they are active in the market.”

This definition implies the Law of One Price (LOP), which states that any identical goods engaged in trade should be sold for the same price anywhere in the world. As Adam et al. (2002) argued, financial integration is a gradual process where the financial markets in the region or the whole world become more and
more correlated with each other and finally the LOP obtains among the regional (global) financial markets. If identical assets are priced differently in the integrated financial markets, the difference in the prices will be arbitraged away immediately. Lack of integration signals the existence of impediments to cross-border capital flows.

1. Measures of Financial Integration

European countries have experienced rapid financial market integration, especially since the introduction of the euro in 1999. The process of financial integration within the European countries has been analyzed widely in the literature (Kasa, 1992; Adam et al., 2002; Baele et al., 2004; Kim, Lucey and Wu, 2004). A complex array of measures and econometric methodologies have been developed to monitor the process of European financial market integration, which may give some inspirations on the study of the East Asian bond market integration.

The price-based measure relies on the Law of One Price (LOP). The financial markets are integrated when the LOP holds. Given this consideration, price-based measure examines the financial integration based on the discrepancies in the asset prices and returns. In practice, price-based measures, such as asset price differentials and cross-sectional dispersion of interest rates, are used to investigate the extent of financial market integration. They are constructed through comparing the prices or returns of identical assets that are issued in different countries but generate identical cash flows. Beta-convergence measure, which is borrowed from growth literature, is used to examine the speed of financial market convergence. Earlier empirical evidence on price-based measure are documented as follows.

Adam et al. (2002) firstly proposed the cross-sectional standard deviation of yields and beta-convergence measure to assess the financial integration in all European Union (EU) member countries. Cross-sectional standard deviation of yields measures the degree of financial integration, while beta-convergence offers the speed of financial integration. Their results revealed that the interest rate differentials in bond markets decreased substantially among EU member countries. However, the significant reduction of nominal interest rate differentials may be ascribed to the decrease in cross-country inflation differentials to a large extent. The cross-sectional standard deviation of yields and beta-convergence measure were also applied by Baele et al. (2004) to measure financial market
integration in the euro area. The results suggested that since the adoption of the euro, the government bond markets in the euro area became more and more integrated. However, there was still scope for further integration of government bond markets, since the difference in interest rates was resulted from the difference in liquidity and credit risks.

Quantity-based measure accesses financial integration through asset quantity and flows, which has been divided into two categories. Financial markets in a group of economies become more and more correlated with each other through the process of financial integration, where cross-border capital flows increase and the prices of identical financial assets converge (Brouwer, 2005). Based on cross-border asset holdings, European Central Bank (2010) indicates that the level of financial integration among the EU countries is rising. Stavarek, Repkova and Gajdosova (2011) investigate the equity market integration in the euro area through measuring the cross-border holdings of regional equities. The indicator shows the cross-border holdings increase, implying the integration in equity markets has taken place in the euro area.

On a basis of the conception that financial markets become more correlated with each other in the process of financial integration, several econometric techniques, such as correlation matrix, co-integration technique and Granger causality test, are widely applied in the literature to assess the extent of financial market integration. Co-integration technique and Granger causality test can reveal the long-term and short-term relations between the financial markets respectively.

Co-integration technique was first introduced by Kasa (1992) to assess the equity market integration in Canada, Japan, England, Germany and United States. The results revealed a long-term integration relationship among the five equity markets, implying that there was a single common stochastic trend driving the movement of those equity markets. The research by Worthington, Katsura and Higgs (2003) applied both the co-integration technique and Granger causality test to detect the interaction among the European equity markets before, during and after the adoption of the euro in January 1999. According to the results, the European financial markets have become more integrated since 1999. In addition, the French equity market turned out to be most influential among regional equity markets before and after 1999. The research on the short-term correlations between the bond markets has great practical implications on international portfolio diversification. As previous studies suggested low correlation between
the market returns enables investors to diversify assets risks and maximize their risk-adjusted returns. Co-integration analysis and Granger causality test are further applied in the researches by Ceylan (2006) and Click and Plummer (2003).

2. Studies on East Asian Financial Integration

The study on East Asian financial integration started relatively late. A substantial body of literature on East Asian financial integration have focused on the equity markets. Few empirical studies have been conducted for the bond markets convergence in East Asia. The research on bond market is mainly hampered by the data limitation, however, the regional bond market integration merits investigation, as it has important implications for policymakers.

Yu, Fung and Tam (2007) provide a survey of indicators and measures in different dimensions (cross-country return dispersion, Dynamic co-integration analysis, market cycle synchronization, beta-convergence of bond return and Dynamic conditional correlation) to determine the extent to which economies are financially integrated in East Asia before 2007. Government bonds with maturities of 2-year, 5-year and 10-year are examined. Their empirical results broadly show that financial integration in East Asia is still in its infancy and very little progress has taken place since 2003. The yield convergence in the bond markets of Japan, Korea, Singapore and Hong Kong appears to be more complete.

Asian Bond Monitor (2005) develops a new indicator, named Average Absolute Cross-Market Differentials (AAD), to assess the degree of Asian bond market integration before 2005. According to the results, cross-market differential of bond yields has been declined over the sample period, which indicates increased level of financial integration in Asia. However, the differentials among the Asian bond market still remain significantly high. Calvi (2010) employs co-integration and Granger causality test to investigate the long-run and short-run cross-country price relationship in East Asian financial markets respectively. Despite of the implementation of regional initiatives to promote regional financial integration, co-integration test does not find the existence of long-term equilibrium relationship between the bond markets in East Asia. According to the results of Granger causality test, there seems to be a lack of short-term relationships among the regional bond markets. Moreover, it’s impossible to figure out a bond market leader in East Asia.
Park (2013) applies beta-convergence measure and cross-country bond return dispersion to monitor the bond market integration process in emerging Asia. The study uses principal component analysis to construct the benchmark yield for the bond markets in the region. The convergence of government bond yields has increased since late 2005. The speed of convergence increased substantially during the 2008 world financial crisis. However, the speed was still much smaller than that of equity market. Furthermore, divergence took place at some time points.

III. DATA AND METHODOLOGY

1. Data

East Asia, defined here, includes the ten Association of Southeast Asian Nations (ASEAN) countries plus Republic of Korea (Korea), People’s Republic of China (China), Hong Kong and Japan. Because the bond markets in Brunei Darussalam, Cambodia, Laos PDR, Vietnam and Myanmar are planned to be created or in the early stages of development, they are excluded in the analysis. Nine economies in the East Asian region are finally covered in this study, namely, China, Japan, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand.

Even though ASEAN+3 has been involved in developing local currency corporate bond markets along with the ABMI, corporate bond\(^1\) markets are much less developed than government bond\(^2\) markets in East Asia and the data for corporate bonds are not readily accessible for some markets. Thus, this research focuses on the government bond market integration in East Asia. Moreover, the highly liquid 10-year government bonds\(^3\) are chosen as the representative yields

\(^1\) “Corporates comprise both public and private companies including financial institutions and international organizations. Financial institutions comprise both private and public sector banks and other financial institutions.” The definition is cited from AsianBondsOnline website. http://asianbondsonline.adb.org/regional/data/bondmarket.php?code=LCY_Bond_Market_USD

\(^2\) “Government bonds include obligations of the central government, local governments, the central bank, and state-owned entities.” The definition is cited from AsianBondsOnline website. http://asianbondsonline.adb.org/regional/data/bondmarket.php?code=LCY_Bond_Market_USD

\(^3\) In several developing economies, the bond yield curves are not complete before 2005.

In 2003, Asian Bond Market Initiative (ABMI) was introduced to develop East Asian bond markets. This year is a historic milestone for regional bond market development in East Asia. As a consequence, this research makes a comparison of the extent of East Asian bond market integration between the period before 2003 and after 2003. The first sub-period 2001-2002 presents the integration process after Asian financial turmoil and before the implementation of ABMI. The second sub-period 2003-2006 presents the period after the inauguration of ABMI and before the world financial crisis. The third sub-period is from 2007 to 2008, capturing the integration progress during the world financial crisis. The last sub-period is from 2009 to 2013, depicting the integration process after the 2008 global financial crisis. This is because in response to the 2008 world financial crisis, ASEAN+3 governments have taken steps to consolidate the regional bond markets, such as upgrade of ABMI roadmap, introduction of Credit Guarantee and Investment Facility (CGIF). It is necessary to examine the effectiveness of such measures on the regional bond market integration and make timely adjustment.

10-year nominal government bond yield data are extracted from Thomson Reuters database. Figure 1 plots the nominal 10-year government bond yields of nine East Asian bond markets. The bond yields in the East Asian have generally shown a downward trend since the 2001. The highest bond yields appear in Indonesia and the Philippines, while the bond yields in Japan and Singapore remain lowest in the region. Due to the substantial decrease in the bond yields in Indonesia and the Philippines, the regional bond yields seem more converged than before.

Since the data before 2001 are not available, the analysis restricted the sample period after 2001.
Garcia-Herrero and Wooldridge (2007) demonstrate that country-specific factors have a significant impact on asset returns. The economic development differs greatly among the East Asian economies. To capture the role of country-specific risk in the bond yields, country risk is taken into consideration to explore the regional discrepancy, which have caused by the diverse country risks in East Asia. The calculation of country risk premium is based on the sovereign rating\(^5\) by Moody’s and default spreads by Damodaran (2010)\(^6\). Figure 2 presents the trend of the new 10-year government bond yields, which are calculated though removing the premium for country risk from nominal 10-year government bond yields. There are several noteworthy points as shown in the figure. The new 10-year

\(^5\) The calculation of sovereign ratings by Moody’s considers four broad rating factors: economic strength, institutional strength, fiscal strength and susceptibility to event risks. See (2013), “Sovereign Bond Ratings”.

\(^6\) Based on the default spread in the credit default swaps (CDS), Damodaran has calculated the default spreads for sovereign ratings by rating agencies. See Damodaran (2010), “Equity Risk Premiums (ERP): Determinants, Estimation and Implications”.

Figure 1: 10-year Nominal Government Bond Yield, 2001-2013

(in percent)
government bond yields in East Asia have become more converged than 10-year government nominal bond yields, especially during the period from 2010 to 2012, implying that the large differences in nominal bond yields may partly be attributed to the uneven development of East Asian economies.

Figure 2: 10-year Bond Yield without Premium for Country-Specific Risk
(in percent)

Source: Author’s calculation based on the data from Thomson Reuters database (accessed April 8, 2014) and national official website in each economy.
Note: End of period

2. Methodology

This section presents the methodology that will be used in the empirical analysis. In order to comprehensively investigate the extent to which East Asian bond market integration has evolved, price-based measures (AAD indicator and beta-convergence measure), quantity-based measure and econometric techniques (co-integration test and Granger causality test) are employed in the analysis. The multifaceted nature of financial integration deserves the all kinds of methods with different emphases. The methods used in the analysis are detailed as follows:

In the first place, quantity-based measure is used to figure out whether the East
Asian bond market integration has taken place. This measure is based on the intra-regional foreign bond holdings. In the integrated bond markets where international bonds can be traded freely and at a low cost, investors are more willing to take advantage of the cross-border bond investment to diversify their portfolio. Different from price-based measure, quantity-based measure may not reveal the level of bond market integration, but it can answer the question whether or not the bond market integration process has taken place and complement the priced-based measure (ADB, 2005).

Second, the price-based measure is used to investigate the extent of bond market integration, as well as the speed of bond market convergence. Price-based measures rely on the notion that when bond markets are fully integrated, the Law of One Price (LOP) holds. Identical assets, regardless of the domicile of the issuers or holders, should be priced the same. This analysis employs the average absolute cross-market differentials (AAD), developed by Asian Development Bank (2005), to monitor the yield differentials among the East Asian bond markets. Lower value of AAD suggests higher level of financial integration. The formula for AAD indicator is shown in the equation (1):

$$AAD_t = \frac{1}{n(n-1)} \sum_{i \neq j=1}^{n} \sum_{t=1}^{n} |r_{it} - r_{jt}|$$

(1)

Here, $r_{it}$ stands for the 10-year government bond yield of market i at time point t, while $r_{jt}$ stands for the 10-year government bond yield of market j at time point t. n stands for the total number of bond markets. As East Asia under analysis consists of a diverse group of nine economies with different levels of financial and economic development. Country risk may be a not negligible factor leading to the dispersion in the government bond yields in the region. Under such circumstances, the analysis calculates two separate AADs: the first one is based on the nominal bond yields and the other one is based on the bond yields without premium for country risk. Here, the calculation of the premium for country risk is based on the sovereign rating by Moody’s and default spreads calculated by Damodaran (2010).

Another price-based measure in this analysis is beta-convergence measure. It is widely applied in the literature to assess the speed of financial market integration. Beta-convergence measure was first used in the growth theory and later applied to financial integration by Adam et al. (2002), Rizavi et al. (2011). A negative
The correlation between the yield spread change and its initial level signals the occurrence of bond market convergence. The absolute beta-convergence measure is realized by estimating the equation (2):

\[ \Delta Y_{i,t} = \alpha_{i,t} + \beta_{i,t} Y_{i,t-1} + \sum_{l=1}^{L} r_l \Delta Y_{i,t-l} + \epsilon_{i,t} \]  

(2)

Here, \( Y_{i,t} \) denotes the difference between the 10-year government bond yield in country \( i \) and the regional benchmark bond yield. \( \Delta Y_{i,t} \) denotes the change in two successive periods. \( \alpha_{i,t} \) is a time-varying intercept. \( L \) represents the lag length. A negative \( \beta \) signals the occurrence of convergence and the magnitude of \( \beta \) denotes the speed of convergence. Because there is not a leading bond market in East Asia, the benchmark bond yield in this analysis is calculated using the Principal Component Analysis (PCA) based on the 10-year government bond yields in the nine East Asian bond markets. PCA was first created by Pearson (1901) and later independently developed by Hotelling (1933). It uses an orthogonal transformation to transform a set of observations into a set of principal components (PC), which are linearly uncorrelated with each other. The first PC explains the largest possible variance in the original data. This method has also been used by Park (2013) and Fratzscher (2001) to calculate the benchmark bond yields in East Asia and European countries.

Further, because of the uneven development of East Asian countries, this analysis also applies conditional beta-convergence measures in the research. The conditional beta-convergence measure includes other factors affecting the change of regional 10-year government bond yield differences. Hereby, GDP per capita is chosen as the control variable, as indicated by the equation (3), where \( GDP_{t,t} \) stands for GDP per capita.

\[ \Delta Y_{i,t} = \alpha_{i,t} + \beta_{i,t} Y_{i,t-1} + \sum_{l=1}^{L} r_l \Delta Y_{i,t-l} + \delta_{i,t} GDP_{i,t} + \epsilon_{i,t} \]  

(3)

Finally, two econometric techniques are applied in the analysis: co-integration test, error correction model (ECM) based Granger causality test. They are used to assess the long-term and short-term relationship between the East Asian bond markets. Chen and Knez (1995) suggest that the financial assets need to share common stochastic factors to become integrated. Co-integration test is the tool to detect the presence of a long-term equilibrium relationship among the East Asian...
bond markets in this analysis. The existence of co-integration relationship implies the existence of a common stochastic trend among the regional bond yields and that the yields do not deviate each other too much.

However, co-integration test only reveals the correlations between the East Asian bond markets, but does not identify the causality direction among them. As a result, Granger causality test is applied to detect the causal relations between the bond markets (Granger, 1969). Besides, the test can detect the leading bond market in the region by specifying the direction of the causal relation. In case of co-integration relationships, Granger causality test is accomplished based on the error correction model (ECM) in order not to lose long-run information and avoid spurious problem\(^7\). The lagged error correction term of the long-run equation is added into the short-run dynamic model as shown in equation (4):

\[
\Delta Y_t = \alpha + \sum_{i=1}^{m} \alpha_i \Delta X_{t-i} + \sum_{j=1}^{n} \gamma_j \Delta Y_{t-j} + \beta y_{ecm t-1} + \mu_t
\]  

(4)

Here, \(ecm_{t-1}\) stands for the error correction term at time \(t-1\). The rejection of null hypothesis \(\alpha_1=\alpha_2=\cdots=\alpha_i=0\) implies that \(Y_t\) is Granger-caused by \(X_t\) in the short run, while the rejection of null hypothesis \(\beta_1=\beta_2=\cdots=\beta_j=0\) implies that \(Y_t\) is Granger-caused by \(X_t\) in the long run.

IV. EMPIRICAL RESULTS

The data in this analysis span from January 2001 to December 2013. Because time series data tend to exhibit trend, cycles, random-walking or other non-stationary behaviors, they may cause the spurious regression. As a preliminary step, Augmented Dickey-Fuller (ADF) unit root test is used to examine the stationary properties of all bond yield time series. If the time series are not stationary, one can obtain stationary data by differencing the data set. The lag length of ADF unit root test is determined by Schwarz Information Criterion (SIC). Table 1 contains the results of ADF test with the null hypothesis that there exists a single unit root in the 10-year government bond yield. Analysis of the bond yield level series indicates that all the time series are non-stationary. However, the ADF statistics suggest stationary in first differenced of bond yield time series, indicating that

they are integrated of order one I(1).

Table 1: Results of ADF Unit Root Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level Statistic</th>
<th>Level P-value</th>
<th>First difference Statistic</th>
<th>First difference P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-2.123</td>
<td>0.236</td>
<td>-11.499**</td>
<td>0.000</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>-2.157</td>
<td>0.223</td>
<td>-10.515**</td>
<td>0.000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-1.283</td>
<td>0.589</td>
<td>-10.606**</td>
<td>0.000</td>
</tr>
<tr>
<td>Japan</td>
<td>-1.758</td>
<td>0.400</td>
<td>-11.916**</td>
<td>0.000</td>
</tr>
<tr>
<td>Korea</td>
<td>-2.381</td>
<td>0.149</td>
<td>-12.440**</td>
<td>0.000</td>
</tr>
<tr>
<td>Malaysia</td>
<td>-0.452</td>
<td>0.518</td>
<td>-9.860**</td>
<td>0.000</td>
</tr>
<tr>
<td>Philippines</td>
<td>-1.307</td>
<td>0.625</td>
<td>-11.319**</td>
<td>0.000</td>
</tr>
<tr>
<td>Singapore</td>
<td>-1.074</td>
<td>0.255</td>
<td>-10.056**</td>
<td>0.000</td>
</tr>
<tr>
<td>Thailand</td>
<td>-0.662</td>
<td>0.429</td>
<td>-12.011**</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: The data are calculated by author using Eviews 6.0 and tabulated with Excel.
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.

1. Quantity-based Measure

To address the issue of whether bond market integration has taken place in East Asia, quantity-based measure is applied in the analysis. Figure 3 displays the pattern of aggregate intra-regional foreign bond holdings in East Asia. The more regional investors are, the more integrated the regional bond markets become. The total foreign bond holdings have increased significantly from USD 50.63 billion in 2001 to USD 405.27 billion in 2013. In the meanwhile, as a share of the region’s total foreign bond investment, intra-regional foreign bond investment has also risen from 4% in 2001 to more than 10% in 2013. The upward momentum was temporarily interrupted by the 2007-2008 world financial crisis, but recovered soon and witnessed a more rapid growth from 2008 to 2013. All of the facts suggest that the East Asian bond markets have become integrated than before.

Despite the recent progress made during the past decade, the extent of bond market integration is still very limited, far lagging behind the financial integration in European countries. Only a small share of the region’s total foreign bond investment is directed in the East Asian bond markets (11% in 2013). By contrast, the share of intra-regional portfolio investment in total cross-border portfolio
investments for EU 15 countries records around 60%. This is partly because some East Asian capital markets are still much more closed than the fully open capital markets in Europe. Furthermore, the introduction of Euro has promoted the European financial integration greatly. By contrast, the instable exchange rates among the Asian currencies discourage the regional investors to make intra-regional investment to some extent. As the largest regional investors, Japanese institutional investors have directed only 1% of its total foreign bond investment in East Asia. Consequently, one of the priorities to build a well-functioning regional bond market is to encourage more bond investment in East Asian bond markets from Japanese institutional investors.

Figure 3: Intra-regional Foreign Bond Holdings in East Asia

Source: Author’s calculation based on the data from IMF’s Coordinated Portfolio Investment Survey (CPIS) (accessed on Sep. 28, 2014)

Note: 1. Intra-regional investment share = \[\frac{\text{Total bond investment from the region to the region}}{\text{Total foreign bond investment from the region}}\]
2. Information on the outward investment of China, Mainland is not available, but the inward investment is included in the calculation.

In general, all East Asian economies have continuously raised their intra-regional bond investment, which signals the occurrence of regional financial integration. In absolute terms, Hong Kong tops the intra-regional bond holdings, followed by Singapore and Japan. The investment from the largest three economies constitutes 93.77% of total intra-regional bond holdings. The intra-regional bond

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8 The data are obtained from Asian Economic Integration Monitor (AEIM), November 2014
investment from other economies is inactive. Figure 4 illustrates relative size of intra-regional foreign bond holdings in each economy. The intra-regional bond investment exhibits diverse circumstances. The intra-regional bond investment in Hong Kong, Malaysia and the Philippines, measured by the intra-regional bond holding as a percentage of total foreign bond holdings, has increased a lot, especially after the 2008 world financial crisis. For example, the ratio of intra-regional foreign investment from Hong Kong rose from 17.76% in 2009 to 46.45% in 2012. The share of foreign investment directed in the region from the Philippines increased fourfold from 8.82% to 35.63% over the same period. The intra-regional bond investment in Japan, Korea and Singapore is quite stable during the last decade. Although Japan is among the largest economies in terms of absolute value of intra-regional foreign bond holdings, it ranked last as measured by the relative share of intra-regional foreign bond holdings in the total foreign bond investment. Finally, the intra-regional bond investment from Thailand seems most volatile.

Figure 4: Share of Intra-regional Bond Holdings in Each Economy

( in percent)

Source: Author’s calculation based on the data from IMF’s Coordinated Portfolio Investment Survey (CPIS) (accessed on Sep. 28, 2014)

Note: 1. Intra-regional investment share = \[
\frac{\text{Total bond investment from country } i \text{ to the region}}{\text{Total foreign bond investment from country } i}
\]

2. Information on the outward investment of China, Mainland is not available, but the inward investment is available.
2. Average Absolute Cross-market Differentials (AAD)

The average absolute cross-market differentials (AAD) is used to measure the difference between the regional 10-year government bond yields. Country risk is a not negligible factor driving up the government bond yields. Since the economic development in the nine East Asian economies varies a lot, this analysis makes a comparison between the AAD indicators of nominal bond yields and the bond yields removing the effects of country risk. The comparison reveals how much discrepancy in the East Asian government bond yields are caused by the country risk. The AAD indicators of 10-year government bond yields in East Asia are displayed in the Figure 5. The line in red signals the AAD for nominal 10-year government bond yield, while the line in blue signals the AAD for bond yields without the premium for country risk.

Figure 5: Average Absolute Cross-market Differentials of 10-year Government Bond Yields
(in percentage point)

Source: The data are calculated by author using Excel and graphed with Excel
Note: 1. Six economies are contained in 2001, that is, Japan, Hong Kong, Korea, the Philippines, Singapore and Thailand.
   2. Eight economies are contained in 2002, that is, Japan, Hong Kong, Korea, the Philippines, Singapore, Thailand, China and Malaysia.
   3. Nine economies are contained during the period 2003-2013, that is, Japan, Hong Kong, Korea, the Philippines, Singapore, Thailand, China, Malaysia and Indonesia.
There are several noteworthy points as shown in the figure. First, the cross-market differentials in bond yields have displayed a downward trend during the past years, implying the occurrence of bond market integration in East Asia. This is consistent with the results of quantity-measure. The current dispersion in nominal 10-year government bond yields is around 200 basis points, which is lower than the dispersion in 2001 by about 350 basis points. Second, AAD indicator hiked suddenly in 2007 and the AAD in nominal bond yields surged to 500 basis points at the peak of the world financial crisis, but declined again from the end of 2008. The volatile AAD indicator implies that bond markets in East Asian are sensitive to the world market sentiment. Third, the differentials between the 10-year government bond yields remain high, suggesting that the degree of bond market integration in the East Asia is still low. The differential among the European bond yields almost approached to zero (Baele et al., 2004). Forth, the differentials in the bond yields are partly attributed to the country disparity in the region. The regional sovereign ratings vary a lot, ranging from Baa3 in Indonesia and Thailand to Aa1 in Hong Kong. On average, the variation of country risk among East Asian economies accounts for 30% of the difference in their nominal bond yields. The disparity of the economic and financial development in East Asia may hinder the process of regional bond market integration.


The bond yield level series are integrated of order one I(1), so there is possibility for East Asian bond yields to be co-integrated if the linear combination of the bond yield time series has I(0) process. Johansen-Juselius (JJ) Co-integration test is applied to detect the presence of the long-term equilibrium relationship among the East Asian bond markets since 2001. Table 2 and Table 3 detail the trace and maximum eigenvalue statistics of co-integration tests, respectively, which can be used to determine the number of co-integration vectors. The first column is the number of co-integration correlations. The third and fourth column report the test statistics and p-value respectively.

Both the trace and maximum eigenvalue statistics are significant at the 1% level for the null hypothesis of $r = 0$ and $r \leq 1$, therefore, the null hypotheses
are rejected. The null hypothesis for \( r \leq 2 \) is fail to be rejected, indicating that two co-integration vectors are detected. The co-integration test finds the presence of a stationary long-term equilibrium relationship between the bond yields in the selected nine East Asian economies.

### Table 2: Results of Unrestricted Co-integration Rank Test (Trace)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.084</td>
<td>292.708***</td>
<td>0.000</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.056</td>
<td>182.852***</td>
<td>0.001</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.032</td>
<td>110.765</td>
<td>0.279</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.024</td>
<td>70.237</td>
<td>0.715</td>
</tr>
<tr>
<td>At most 4</td>
<td>0.013</td>
<td>39.666</td>
<td>0.952</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.010</td>
<td>23.506</td>
<td>0.952</td>
</tr>
<tr>
<td>At most 6</td>
<td>0.006</td>
<td>10.595</td>
<td>0.970</td>
</tr>
<tr>
<td>At most 7</td>
<td>0.002</td>
<td>3.332</td>
<td>0.950</td>
</tr>
</tbody>
</table>

Source: The results are calculated by author using Eviews 6.0 and tabulated with Excel
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.

### Table 3: Results of Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

<table>
<thead>
<tr>
<th>Hypothesized No. of CE(s)</th>
<th>Eigenvalue</th>
<th>Trace Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>0.820</td>
<td>109.856***</td>
<td>0.000</td>
</tr>
<tr>
<td>At most 1</td>
<td>0.774</td>
<td>72.086***</td>
<td>0.000</td>
</tr>
<tr>
<td>At most 2</td>
<td>0.725</td>
<td>40.529</td>
<td>0.180</td>
</tr>
<tr>
<td>At most 3</td>
<td>0.557</td>
<td>30.570</td>
<td>0.387</td>
</tr>
<tr>
<td>At most 4</td>
<td>0.401</td>
<td>16.161</td>
<td>0.950</td>
</tr>
<tr>
<td>At most 5</td>
<td>0.180</td>
<td>12.911</td>
<td>0.890</td>
</tr>
<tr>
<td>At most 6</td>
<td>0.075</td>
<td>7.263</td>
<td>0.943</td>
</tr>
<tr>
<td>At most 7</td>
<td>0.036</td>
<td>2.617</td>
<td>0.969</td>
</tr>
</tbody>
</table>

Source: The results are calculated by author using Eviews 6.0 and tabulated with Excel
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.

### 4. Granger Causality Test based on ECM

Based on the view that financial integration process involves deepening links between the financial markets (Garcia-Herrero and Wooldridge, 2007). Granger causality test is implemented to detect the causal relations between individual bond markets and the presence of one or more leading bond markets in East Asia. Given the co-integration relationships among the nine East Asian bond markets,
Granger causality test is based on error correction model in this analysis. This causality test makes it possible to consider long-term and short-term causality among the East Asian bond markets separately. In this procedure, this analysis first investigate whether two selected bond markets are co-integrated with each other and then perform the ECM based Granger causality test. The lag length is selected mainly based on Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC).9

During the first sub-period 2001-2002, the bond markets in East Asia are relatively independent, as indicated by the few causal relations among the markets. Only 4 short-term causal relations are found among the East Asian bond market, while 2 for long-term causal relations. The causal relations between the East Asian bond markets have enhanced significantly during the second sub-period 2003-2006. The short-term and long-term causal relations are 10 and 5, respectively. However, affected by the 2008 world financial crisis, both the short-term and long-term causal links among the nine bond markets decreased to 4. But in the last sub-period 2009-2013, stimulated by the package of measures in the aftermath of the world financial crisis, the causal links among the nine East Asian bond markets increased significantly. The short-term and long-term causal relations record 20 and 16, respectively.

In sum, despite that the East Asian bond market integration process was temporarily interrupted by the 2008 world financial crisis, recent years have witnessed an enhanced causal relations between the East Asian bond markets. Given the significant increase of causal relations right after the implementation of ABMI in 2003 and the adoption of various governments’ measures to integrate regional bond markets in the aftermath of the 2008 world financial crisis, it is reasonable to claim that the package of measures during 2003-2004 and stimulating policies in the aftermath of the 2008 world financial crisis are efficient.

In all four sub-periods, it is impossible to identify a leading bond market within East Asia, despite the fact that the causal relations between the regional bond markets has enhanced. Even though Japan is the most advanced economy in

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9 When selecting the lag length for the Granger Causality Test, if the AIC and SIC agree, this research adopts the lag length suggested by AIC and SIC. If the AIC and SIC indicate different lag lengths, this research refers to other three criterion for lag length selection, namely, Hannan-Quinn information criterion (HQ), Final prediction error (FPE), sequential modified LR test statistic (LR). This research selects the lag length which is most recommended.
the region and embraces the largest bond market, the impact from Japanese bond market on the remaining regional bond markets seems minimal. Japanese bond market has different features from other countries’ bond markets in the sense that the government bond market is more developed and much larger in market size (nine times larger) than corporate bond market in Japan. Thus, this result makes sense and consistent with previous research by Tsukuda, Shimada and Miyakoshi (2013). The results for the Granger causality test during the last sub-period 2009-2013 are detailed in Table 4 and Table 5.

Table 4: Results of Granger Causality Test (2009-2013, short-term)

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>Granger-cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) China</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(2) Hong Kong</td>
<td></td>
<td>-0.02***</td>
<td>-0.02***</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Indonesia</td>
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<td>-0.02***</td>
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<td>(4) Japan</td>
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<td></td>
</tr>
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<td>(5) Korea</td>
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<td>-0.01**</td>
<td>0.01***</td>
<td>-0.02***</td>
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<td></td>
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</tr>
<tr>
<td>(6) Malaysia</td>
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<td>-0.01**</td>
<td>-0.02***</td>
<td>-0.04***</td>
<td>4</td>
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</tr>
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<tr>
<td>(8) Singapore</td>
<td>-0.03***</td>
<td>-0.03***</td>
<td>-0.04***</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Thailand</td>
<td></td>
<td>-0.01**</td>
<td>-0.01**</td>
<td>2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Caused by 0 2 0 2 2 6 2 2 3

Source: analyzed using Eviews 6.0, tabulated by author with Excel
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.

Table 5: Results of Granger Causality Test (2009-2013, long-term)

<table>
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<th></th>
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<th>(3)</th>
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<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>Granger-cause</th>
</tr>
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<tbody>
<tr>
<td>(1) China</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>(2) Hong Kong</td>
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<td>0.03*</td>
<td>0.33***</td>
<td>2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Indonesia</td>
<td></td>
<td>0.03***</td>
<td>0.06***</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Japan</td>
<td>0.52***</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Korea</td>
<td></td>
<td>0.10***</td>
<td>0.05**</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Malaysia</td>
<td>0.09*</td>
<td>0.37***</td>
<td>0.09**</td>
<td>0.12***</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Philippines</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>(8) Singapore</td>
<td>0.60***</td>
<td>0.08***</td>
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<td>0.30***</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) Thailand</td>
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<td>0.17***</td>
<td></td>
<td></td>
<td>0.14***</td>
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<td></td>
</tr>
</tbody>
</table>

Caused by 0 2 2 1 2 4 0 3 2

Source: analyzed using Eviews 6.0, tabulated by author with Excel
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.
5. Beta-convergence Measure

Beta-convergence measure is employed to investigate the speed of bond market convergence in East Asia. This study uses daily data to capture time-variation in the bond yields\(^{10}\). The regional benchmark bond yield are derived by Principal Component Analysis (PCA), based on the bond yields from the nine East Asian bond markets. The results for PCA are presented in Table 6 and Table 7:

Table 6: Result of Principle Component Analysis

<table>
<thead>
<tr>
<th>Number</th>
<th>Value</th>
<th>Difference</th>
<th>Proportion</th>
<th>Cumulative Value</th>
<th>Cumulative Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.0438</td>
<td>4.8776</td>
<td>0.6715</td>
<td>6.0438</td>
<td>0.6715</td>
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<tr>
<td>2</td>
<td>1.1662</td>
<td>0.5659</td>
<td>0.1296</td>
<td>7.2100</td>
<td>0.8011</td>
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<tr>
<td>3</td>
<td>0.6003</td>
<td>0.0540</td>
<td>0.0667</td>
<td>7.8102</td>
<td>0.8678</td>
</tr>
<tr>
<td>4</td>
<td>0.5463</td>
<td>0.2684</td>
<td>0.0607</td>
<td>8.3565</td>
<td>0.9285</td>
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<tr>
<td>5</td>
<td>0.2779</td>
<td>0.0864</td>
<td>0.0309</td>
<td>8.6344</td>
<td>0.9594</td>
</tr>
<tr>
<td>6</td>
<td>0.1915</td>
<td>0.1124</td>
<td>0.0213</td>
<td>8.8259</td>
<td>0.9807</td>
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<tr>
<td>7</td>
<td>0.0791</td>
<td>0.0157</td>
<td>0.0088</td>
<td>8.9050</td>
<td>0.9894</td>
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<td>8</td>
<td>0.0634</td>
<td>0.0317</td>
<td>0.0070</td>
<td>8.9683</td>
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</tr>
<tr>
<td>9</td>
<td>0.0317</td>
<td>-</td>
<td>0.0035</td>
<td>9.0000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Source: Author’s calculation based on Eviews 5.0
Note: Number in the first column refers to the principal components.

Table 7: Result of Principle Component Analysis

<table>
<thead>
<tr>
<th>Eigenvectors (loadings):</th>
<th>PC 1</th>
<th>PC 2</th>
<th>PC 3</th>
<th>PC 4</th>
<th>PC 5</th>
<th>PC 6</th>
<th>PC 7</th>
<th>PC 8</th>
<th>PC 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>-0.003</td>
<td>0.883</td>
<td>0.229</td>
<td>0.316</td>
<td>0.023</td>
<td>0.030</td>
<td>0.230</td>
<td>0.094</td>
<td>-0.071</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0.359</td>
<td>0.165</td>
<td>-0.468</td>
<td>-0.109</td>
<td>-0.289</td>
<td>-0.257</td>
<td>0.243</td>
<td>0.001</td>
<td>0.636</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.345</td>
<td>-0.222</td>
<td>0.242</td>
<td>0.235</td>
<td>0.677</td>
<td>-0.347</td>
<td>0.217</td>
<td>0.254</td>
<td>0.167</td>
</tr>
<tr>
<td>Japan</td>
<td>0.374</td>
<td>-0.042</td>
<td>-0.349</td>
<td>0.213</td>
<td>-0.147</td>
<td>0.251</td>
<td>-0.177</td>
<td>0.688</td>
<td>-0.319</td>
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<td>Korea</td>
<td>0.367</td>
<td>0.029</td>
<td>0.099</td>
<td>0.487</td>
<td>-0.089</td>
<td>-0.074</td>
<td>-0.654</td>
<td>-0.402</td>
<td>0.122</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.307</td>
<td>0.014</td>
<td>0.680</td>
<td>-0.446</td>
<td>-0.357</td>
<td>-0.061</td>
<td>-0.149</td>
<td>0.278</td>
<td>0.117</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.355</td>
<td>-0.276</td>
<td>0.194</td>
<td>0.265</td>
<td>-0.248</td>
<td>0.450</td>
<td>0.570</td>
<td>-0.306</td>
<td>-0.088</td>
</tr>
<tr>
<td>Singapore</td>
<td>0.379</td>
<td>0.106</td>
<td>-0.152</td>
<td>-0.273</td>
<td>-0.022</td>
<td>-0.482</td>
<td>0.109</td>
<td>-0.293</td>
<td>-0.646</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.337</td>
<td>0.232</td>
<td>-0.122</td>
<td>-0.455</td>
<td>0.488</td>
<td>0.553</td>
<td>-0.155</td>
<td>-0.188</td>
<td>0.087</td>
</tr>
</tbody>
</table>

Source: Author’s calculation based on Eviews 5.0

\(^{10}\) Bond yields refer to nominal bond yield in the calculation of price-based measures and quantity-based measures unless otherwise noted.
Before proceeding with the beta-convergence measure, the property of each variable in the regression has been examined through ADF unit test. Table 8 presents the test statistics and p-value of ADF test. The first column shows the variables used in the regression, which represents the difference between the nominal bond yield in one country and regional benchmark bond yield. As evidenced from the results, all the variables are stationary.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level Statistic</th>
<th>Level P-value</th>
<th>First difference Statistic</th>
<th>First difference P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>d(China)</td>
<td>-5.152***</td>
<td>0.000</td>
<td>-2.866**</td>
<td>0.049</td>
</tr>
<tr>
<td>d(Hong Kong)</td>
<td>-5.775***</td>
<td>0.000</td>
<td>-3.315**</td>
<td>0.014</td>
</tr>
<tr>
<td>d(Indonesia)</td>
<td>-7.674***</td>
<td>0.000</td>
<td>-3.558***</td>
<td>0.007</td>
</tr>
<tr>
<td>d(Japan)</td>
<td>-5.948***</td>
<td>0.000</td>
<td>-2.873**</td>
<td>0.049</td>
</tr>
<tr>
<td>d(Korea)</td>
<td>-6.978***</td>
<td>0.000</td>
<td>-3.840***</td>
<td>0.003</td>
</tr>
<tr>
<td>d(Malaysia)</td>
<td>-5.395***</td>
<td>0.000</td>
<td>-3.383**</td>
<td>0.012</td>
</tr>
<tr>
<td>d(Philippines)</td>
<td>-5.596***</td>
<td>0.000</td>
<td>-3.981***</td>
<td>0.002</td>
</tr>
<tr>
<td>d(Singapore)</td>
<td>-6.291***</td>
<td>0.000</td>
<td>-3.914***</td>
<td>0.002</td>
</tr>
<tr>
<td>d(Thailand)</td>
<td>-6.485***</td>
<td>0.000</td>
<td>-3.452***</td>
<td>0.009</td>
</tr>
</tbody>
</table>

Source: analyzed using Eviews 6.0, tabulated by author with Excel
Note: *, ** and *** mean significance at 10%, 5% and 1% level respectively.

Following Fratzscher (2001) and Park (2013), rolling estimation method is applied in the analysis. The estimation takes three months a window from January 1th 2001 to December 31th 2013 and moves the window one month forward once. Figure 6 and Figure 7 plot the results of absolute and conditional beta-convergence measures, respectively. There are several noteworthy points as shown in the results. First, both the absolute and conditional beta-convergence coefficients take negative signs at most of the time, which highlights the fact that bond market integration has taken place in the East Asia. Second, the speed of regional bond market convergence is quite volatile. The beta-convergence coefficients turn positive in some points, which signals divergence of the bond markets. Divergence was most prominent right after the collapse of Lehman Brothers in...
2007, which is consistent with the results of AAD indicator. The East Asian bond markets remain susceptible to sudden shifts in global market sentiments. Third, in general, East Asian bond market integration process is very slow, as evidenced by that the small magnitude of beta-convergence coefficients. The bond market convergence lags behind the equity market integration, because the beta-convergence coefficient of Asian equity market convergence which is around -1 (Park, 2013). Fourth, bond market integration accelerated in the period of 2003-2004 and in the aftermath of the world financial crisis, indicating the effectiveness of governments’ cooperative efforts. Fifth, the conditional beta-convergence is slightly higher than the absolute beta-convergence, implying that not all the bond markets converge to the same steady state.

Figure 6: Results of Absolute Beta-convergence of 10-year Government Bond Yields

Source: Author’s calculation based on the data from Thomson Reuters database with Stata 6.0, plotted with Excel
V. CONCLUSION

Since the 1997 Asian financial crisis, East Asian governments and various working groups have made concerted efforts to promote the regional bond market integration. This research aims to assess the progress made in East Asian bond market integration thus far. The key findings are summarized as follows:

First, this research confirms the results of earlier studies that the East Asian bond markets have become more integrated than before. There have been incremental intra-regional cross-border bond holdings in the region over the period 2001-2013. The cross-market bond yield differentials have presented a downward trend. Furthermore, in the long run, there is an equilibrium relationship among the nine East Asian bond markets. Both the long-term and short-term causal relations
between the East Asian bond markets have enhanced during the last decades. Such findings demonstrate the occurrence of East Asian bond market integration.

Second, the differentials among the bond markets in East Asia remain significantly high and the regional bond market integration process is slow. The cross-market nominal bond yield differentials remained around 200 basis points in 2013, which fell short of the bond yield differentials in European bond market (almost approached zero). The beta-convergence coefficients turned positive in some points, which divergence of the bond markets, especially at the beginning of the world financial crisis in 2007. The disparity in the economic and financial development in East Asia may take part of the responsibility for slow bond market integration process. On average, the disparity of regional country risks accounts for 30% of the difference in the regional government bond yields. Furthermore, despite the enhanced causal relations between the regional bond markets, it is still impossible to identify a leading bond market within East Asia.

Third, the East Asian bond markets remain susceptible to sudden shifts in global investor confidence and market expectations, as suggested by the rising cross-market bond yield differentials, decreased intra-regional cross-border investment, reduced causal relations and positive beta-convergence measures in 2007. But the quick recovery from the 2008 world financial crisis of East Asian economies has shown that, with the concerted efforts to develop regional bond markets, East Asia has built more resilient and healthier financial sectors than before.

Fourth, government policies are crucial for the East Asian bond market integration process. The convergence of bond markets speeded up during two periods. The first one is during the period right after the implementation of ABMI in 2003. The second one is the period 2009-2013, when the East Asian governments put forward packages of stimulus measures to further integrate regional bond markets and tackle the adverse effects of the world financial crisis. This can be evidenced by the increased causal links and beta-convergence measure. The fact implies that the regional cooperative initiatives and dialogues are crucial for integrating the regional bond markets and East Asian bond market integration may need more government-directed measure.

In short, East Asian bond market integration process has achieved encouraging progress during the past years and more government-directed measures are needed to further strengthen the regional bond market integration. A lot still
remains to be done to harmonize rules across the region, strengthen markets infrastructure, overcome remaining market impediments, and tighten legal and regulatory framework.

REFERENCES


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Potential Economic Impacts of the Vietnam-Korea Free Trade Agreement on Vietnam

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This paper provides an assessment of the potential economic impacts of the Vietnam-Korea free trade agreement on Vietnam, by using general equilibrium modeling. The results show that Vietnam-Korea FTA will increase aggregate welfare for both countries in the long run. The most important gains accrue from better allocation of resources consequent to trade liberalization. All the sectoral differences and changes are consistent with the trade profiles of the two countries, and the long-run results are more pronounced than those of the short-run. In comparison with other ASEAN countries, the CGE analysis suggests that Vietnam’s agriculture exports to Korea would especially rise in the long run. However, there will be strong competition in this sector among ASEAN members. Thus, an earlier conclusion of a comprehensive FTA with Korea is expected to be a good strategy for Vietnam, so as to avoid the direct competition with ASEAN members in the future.

Keywords: Free Trade Agreement, General Equilibrium, GTAP, Vietnam, Korea, Trade Policy

JEL classification: F1, F4, D5

I. INTRODUCTION

Vietnam-Korea relations have developed considerably since the establishment of diplomatic ties in 1992. The relationship has been rapidly deepened in all fields such as the political and economic, social and cultural fields and trade and investment, education and people-to-people exchanges. During the short period of two decades, there has been great progress in bilateral trade relations. Trade

* Corresponding Author
volume has increased 74-fold from about US$ 500 million in 1992 to US$ 37 billion in 2015. The average annual growth rate of Vietnam’s imports from Korea was about 25 percent, whereas Vietnam’s exports to Korea increased by nearly 19 percent per annum during this period (Table 1). Korea has been one of Vietnam’s top trading partners since 1992; Korea is the second-largest import market and fourth-largest export market for Vietnam, while Vietnam was Korea’s fourth-largest export market in 2015. Vietnam is also one of Korea’s largest export markets for industrial goods. On the other hand, although Korea’s trade share declined, Korea has maintained its position as one of Vietnam’s top 10 trading partners for the past 20 years (UNSD, 2016). In an effort to improve on the strategic partnership established between the two countries, the trade ministers of Vietnam and Korea signed a free-trade agreement (FTA) on May 5th, 2015. Both countries hope bilateral trade volume will reach US$70 billion by 2020 (VCCI, 2016).

Vietnam is the most attractive integration partner for East Asian countries such as China, Japan and Korea. Vietnam is a member of ASEAN, and ASEAN has signed trade agreements with China, Korea and Japan. The Vietnam-Korea FTA (VKFTA) is in effect; thus, an evaluation of the potential impacts of the VKFTA is necessary and important for policy implications for both countries.

There are few studies available on the effects of a potential FTA between Vietnam and Korea, because it has only been recently initiated. Previous studies (MUTRAP, 2010; Cheong, 2012) used econometric analysis, mostly the Computable General Equilibrium (CGE) model, to assess the FTA’s effects on the economy as a whole, which does not focus on impacts on the industry level. Moreover, the Vietnam-Korea FTA was initiated in the context of the implementation of the ASEAN-Korea FTA (AKFTA). Thus, it is necessary to evaluate the potential impacts of the VKFTA versus the AKFTA.

The objectives of this paper are to provide a comprehensive assessment of the potential economic impacts of the Vietnam-Korea Free Trade Agreement, compare the potential effects of the Vietnam-Korea FTA in the context of the ASEAN-Korea FTA, and suggest policy implications for Vietnam.

The paper is organized as follows. Section 2 provides general information on the background to the trade relationship between Vietnam and Korea. Section 3 analyzes the impact of the Vietnam and Korea FTA on Vietnam’s economy including on elements such as: welfare, economic growth, trade, industrial production, and
employment. Section 4 compares the potential effects of the Vietnam-Korea FTA in the context of the ASEAN-Korea FTA, focusing on the agricultural sector. Section 5 proposes policy implications and concludes the paper.

II. Vietnam - Korea Trade Relations

Korea has been one of Vietnam’s top trading partners since 1992. The share of Vietnam’s trade with Korea in Korea’s total trade has increased rapidly over the years. On the other hand, though Korea’s trade share has declined, Korea has maintained its position as one of Vietnam’s top 10 trading partners for the past 20 years. As can be seen from Table 1, except for the period during the Asian financial crisis, the trade volume between the two countries has increased rapidly, at about 19 percent annually on average. The scale of bilateral trade relations further deepened in 2007, when the Korea-ASEAN Free Trade Agreement (merchandise) went into effect. In terms of volume, Vietnam’s exports to Korea rose from only US$ 57.3 million in 1992 to US$ 7,167 million in 2014, while its imports from Korea increased dramatically from US$ 436.2 million to US$ 21,728 million in the same period.

Table 1. Vietnam-Korea Bilateral Trade Volume and Growth: 1992-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Export (US$ mil)</th>
<th>Inc. Rate (%)</th>
<th>Import (US$ mil)</th>
<th>Inc. Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>57.3</td>
<td>39.32</td>
<td>436.2</td>
<td>119.25</td>
</tr>
<tr>
<td>1995</td>
<td>193.6</td>
<td>70.16</td>
<td>1,351.0</td>
<td>31.50</td>
</tr>
<tr>
<td>2000</td>
<td>322.4</td>
<td>22.03</td>
<td>1,686.0</td>
<td>16.67</td>
</tr>
<tr>
<td>2005</td>
<td>694.0</td>
<td>3.08</td>
<td>3,431.7</td>
<td>5.41</td>
</tr>
<tr>
<td>2010</td>
<td>3,330.8</td>
<td>40.54</td>
<td>9,652.1</td>
<td>35.00</td>
</tr>
<tr>
<td>2014</td>
<td>7,167.5</td>
<td>7.25</td>
<td>21,728.5</td>
<td>5.08</td>
</tr>
<tr>
<td>Average</td>
<td>24.55</td>
<td>19.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: UN Comtrade database, 2015

Trade between Vietnam and Korea by HS chapter is shown in Table 2. The reported data shows that machinery, textiles, and mineral products are major export and import products of Vietnam. These items account for about 54 percent, 41 percent, and 26 percent of Vietnam export and import, respectively. For trade in manufacturing, electrical, metal, and textile products account for more than 50
percent of Vietnam’s imports from Korea. These sectors also show a big deficit in trade between the two countries.

Table 2. Vietnam’s Trade with Korea by Sector in 2014

<table>
<thead>
<tr>
<th>Sector</th>
<th>HS Code</th>
<th>Exports (US$ million)</th>
<th>Share (%)</th>
<th>Imports (US$ million)</th>
<th>Share (%)</th>
<th>Balance (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Products</td>
<td>01-05</td>
<td>504.4</td>
<td>6.70</td>
<td>121.3</td>
<td>0.54</td>
<td>383.2</td>
</tr>
<tr>
<td>Vegetable Products</td>
<td>06-15</td>
<td>301.5</td>
<td>4.00</td>
<td>14.8</td>
<td>0.07</td>
<td>286.6</td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>16-24</td>
<td>231.2</td>
<td>3.07</td>
<td>79.6</td>
<td>0.36</td>
<td>151.7</td>
</tr>
<tr>
<td>Mineral Products</td>
<td>25-27</td>
<td>363.9</td>
<td>4.83</td>
<td>675.1</td>
<td>3.01</td>
<td>(311.1)</td>
</tr>
<tr>
<td>Chemicals</td>
<td>28-38</td>
<td>119.5</td>
<td>1.59</td>
<td>1,051.4</td>
<td>4.69</td>
<td>(931.9)</td>
</tr>
<tr>
<td>Plastics/Rubbers</td>
<td>39-40</td>
<td>170.3</td>
<td>2.26</td>
<td>2,293.5</td>
<td>10.24</td>
<td>(2,123.2)</td>
</tr>
<tr>
<td>Leather &amp; Furs</td>
<td>41-43</td>
<td>92.5</td>
<td>1.23</td>
<td>243.6</td>
<td>1.09</td>
<td>(151.2)</td>
</tr>
<tr>
<td>Wood Products</td>
<td>44-49</td>
<td>351.4</td>
<td>4.67</td>
<td>216.3</td>
<td>0.97</td>
<td>135.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>50-63</td>
<td>2,477.2</td>
<td>32.89</td>
<td>2,388.0</td>
<td>10.66</td>
<td>89.2</td>
</tr>
<tr>
<td>Footwear/Headgear</td>
<td>64-67</td>
<td>345.7</td>
<td>4.59</td>
<td>52.5</td>
<td>0.23</td>
<td>293.2</td>
</tr>
<tr>
<td>Stone/Glass</td>
<td>68-71</td>
<td>62.2</td>
<td>0.83</td>
<td>98.1</td>
<td>0.44</td>
<td>(35.8)</td>
</tr>
<tr>
<td>Metals</td>
<td>72-83</td>
<td>379.9</td>
<td>5.04</td>
<td>3,073.1</td>
<td>13.72</td>
<td>(2,693.2)</td>
</tr>
<tr>
<td>Machinery/Electrical</td>
<td>84-85</td>
<td>1,290.6</td>
<td>17.14</td>
<td>10,093.4</td>
<td>45.05</td>
<td>(8,802.9)</td>
</tr>
<tr>
<td>Transportation</td>
<td>86-89</td>
<td>105.0</td>
<td>1.39</td>
<td>583.5</td>
<td>2.60</td>
<td>(478.5)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>90-97</td>
<td>372.2</td>
<td>4.94</td>
<td>744.5</td>
<td>3.32</td>
<td>(372.3)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>7,531.4</td>
<td>100.00</td>
<td>22,403.5</td>
<td>100.00</td>
<td>(14,872.1)</td>
</tr>
</tbody>
</table>

Source: UN Comtrade database, 2015

In order to assess whether Vietnam-Korea bilateral trade is consistent with the comparative advantage principle, or whether Vietnam-Korea trade is complementary or competitive in nature, we formulated the Revealed Comparative Advantage (RCA-see WTO 2012) for the two countries in the year 2014. Table 3 summarizes the RCA profiles of Vietnam (RCAV) and Korea (RCAK) at HS 6-digit level, according to the 15 HS sectors. Starting at the left-hand data column, it is evident that nearly all sectors contain 6-digit HS codes where both Vietnam and Korea appear to hold a comparative advantage (RCAV and RCAK > 1). However, the number of codes for which both areas’ RCAs are greater than one is far smaller than the number of codes for which both Vietnam and Korea do not have a comparative advantage (RCAV and RCAK < 1), as indicated in the second data column. The third data column shows the number of codes for which Vietnam has
RCAs greater than one, but Korea does not. Among these 5,251 codes, Vietnam holds a comparative advantage against Korea mostly in the chemical, textiles, and machinery/electrical sectors. However, these sectors also contain a significant amount of codes for which Vietnam’s RCAs are less than one, but Korea’s RCAs are greater than one, as shown in the last column. This indicates the big range of overlapping RCAs between two countries, which implies that the intra-industry becomes more intense when the Vietnam-Korea FTA is in effect.

Table 3. Summary of RCA in Vietnam and Korea’s Exports

<table>
<thead>
<tr>
<th>Sector</th>
<th>HS Code</th>
<th>RCAV and RCAF &gt; 1</th>
<th>RCAV and RCAF &lt; 1</th>
<th>RCAV &gt; 1, RCAF &lt; 1</th>
<th>RCAV &lt; 1, RCAF &gt; 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Products</td>
<td>01-05</td>
<td>76</td>
<td>596</td>
<td>370</td>
<td>302</td>
</tr>
<tr>
<td>Vegetable Products</td>
<td>06-15</td>
<td>71</td>
<td>633</td>
<td>409</td>
<td>1,077</td>
</tr>
<tr>
<td>Foodstuffs</td>
<td>16-24</td>
<td>49</td>
<td>373</td>
<td>238</td>
<td>184</td>
</tr>
<tr>
<td>Mineral Products</td>
<td>25-27</td>
<td>32</td>
<td>264</td>
<td>160</td>
<td>136</td>
</tr>
<tr>
<td>Chemicals</td>
<td>28-38</td>
<td>157</td>
<td>1,417</td>
<td>700</td>
<td>874</td>
</tr>
<tr>
<td>Plastics/Rubbers</td>
<td>39-40</td>
<td>96</td>
<td>326</td>
<td>177</td>
<td>245</td>
</tr>
<tr>
<td>Leather &amp; Furs</td>
<td>41-43</td>
<td>29</td>
<td>109</td>
<td>86</td>
<td>52</td>
</tr>
<tr>
<td>Wood Products</td>
<td>44-49</td>
<td>54</td>
<td>416</td>
<td>265</td>
<td>205</td>
</tr>
<tr>
<td>Textiles</td>
<td>50-63</td>
<td>414</td>
<td>1,178</td>
<td>950</td>
<td>642</td>
</tr>
<tr>
<td>Footwear/Headgear</td>
<td>64-67</td>
<td>29</td>
<td>65</td>
<td>68</td>
<td>26</td>
</tr>
<tr>
<td>Stone/Glass</td>
<td>68-71</td>
<td>36</td>
<td>350</td>
<td>197</td>
<td>189</td>
</tr>
<tr>
<td>Metals</td>
<td>72-83</td>
<td>241</td>
<td>885</td>
<td>470</td>
<td>656</td>
</tr>
<tr>
<td>Machinery/Electrical</td>
<td>84-85</td>
<td>248</td>
<td>1,294</td>
<td>663</td>
<td>879</td>
</tr>
<tr>
<td>Transportation</td>
<td>86-89</td>
<td>43</td>
<td>217</td>
<td>121</td>
<td>139</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>90-97</td>
<td>107</td>
<td>601</td>
<td>377</td>
<td>331</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,682</td>
<td>8,724</td>
<td>5,251</td>
<td>5,937</td>
</tr>
</tbody>
</table>

Source: UN comtrade data, 2015

Sectors in which both Korea and Vietnam have a comparative disadvantage are candidates for trade diversion, because duty reduction in these codes could enable exports from Vietnam to Korea (or exports from Korea to Vietnam) to increase at the expense of the country that lacks comparative advantage. The information from the RCAs’ analysis indicates that the structure of bilateral trade between Korea and Vietnam is complementary rather than competitive, as the countries hold very different comparative advantages.
III. Potential Impacts of the Vietnam-Korea FTA

This section provides an analysis of the potential impacts of the Vietnam-Korea FTA based on general equilibrium modeling. The general equilibrium modeling is based on the Global Trade Analysis Project (GTAP) model. Two hypothetical tariff liberalization scenarios are examined in the GTAP model, focusing on the short run and long run. GTAP is a multi-region computable general equilibrium (CGE) model designed for the comparative-static analysis of trade policy issues (Adams et al. 1997). It can be used to capture effects on output mix, factor usage, trade effects and resultant welfare distribution between countries as a result of changing trade policies at the country, bilateral, regional and multilateral levels. Since the GTAP model places emphasis on resource reallocation across economic sectors, it is a good instrument for identifying the winning and losing countries and sectors under policy changes involving the trade aspects of the FTAs. The theory of the GTAP model is documented in Hertel (1997) and the brief summary of the GTAP model used here is described in Ahmed (2010). In this study, GTAP database version 7 was aggregated by combining countries into three single regions: Vietnam, Korea, and Rest of the World (ROW). 57 commodities are aggregated into 10 commodity groups.

GTAP 7 database uses 2004 as its reference year. The year 2004 cannot serve as a good basis to analyze the FTA between Vietnam and Korea, since many agreements were signed in the Asian region from 2004 until present. During this period of time, Vietnam signed various agreements via ASEAN, of particular note the FTA between ASEAN and Korea (AKFTA), which went into effect in 2007. Since tariff rates will be effective for bilateral trade between Korea and Vietnam after the implementation of the AKFTA, it should be adjusted and incorporated into the model in order to forecast a more realistic estimation than using GTAP’s base tariff rates. Thus, we performed some updates to the database, in order to bring the baseline to the year 2010. Given that altering only tariff data and leaving the other flows of the database untouched will violate the initial

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2 A caveat of this study is that the analysis was conducted using GTAP database V7 due to limited resources and availability of the newest database to the authors. Nevertheless, when an anonymous referee checked some results of our analysis using the newest version, GTAP V8.1, the main results of this study remained qualitatively unchanged. We are grateful to the anonymous referee for his/her efforts.
consistency of the database, it is necessary to allow the rest of the database to change so as to maintain its internal balance. Following Malcolm (1998), the tax adjustment procedure used here includes a number of modifications to the GTAP model.

Table 4. Base and New Bilateral Tariff Data

<table>
<thead>
<tr>
<th>Sector</th>
<th>Base data</th>
<th>New data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vietnam</td>
<td>Korea</td>
</tr>
<tr>
<td>Fishing</td>
<td>5.38</td>
<td>19.89</td>
</tr>
<tr>
<td>Mineral products</td>
<td>17.95</td>
<td>4.14</td>
</tr>
<tr>
<td>Other agricultures</td>
<td>2.98</td>
<td>289.21</td>
</tr>
<tr>
<td>Electrical and Machinery</td>
<td>7.70</td>
<td>5.30</td>
</tr>
<tr>
<td>Textile</td>
<td>30.22</td>
<td>10.46</td>
</tr>
<tr>
<td>Transportation</td>
<td>34.29</td>
<td>5.33</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>5.80</td>
<td>5.03</td>
</tr>
<tr>
<td>Plastic and Rubber</td>
<td>6.88</td>
<td>3.15</td>
</tr>
<tr>
<td>Other manufactures</td>
<td>21.96</td>
<td>13.88</td>
</tr>
<tr>
<td>Services</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Average</td>
<td>14.80</td>
<td>39.60</td>
</tr>
</tbody>
</table>

Source: Author’s calculation from WITS and GTAP database

The bilateral tariff rates for the GTAP’s base year (2004) and the latest applied rates (2010) are presented in Table 4. As can be seen, the remaining tariff rates for both parties are high compared to that of 2010. Overall, tariff rates have been reduced in Vietnam and Korea during the period of 2004-2010 as a result of the Korea-ASEAN FTA. The remaining rates are relatively low in manufactured products compared with agricultural items. This means manufacturing sectors are virtually liberalized in the ASEAN-Korea FTA, while Korea has marked agricultural and marine products as sensitive products and several other products among them have been designated as highly sensitive products. Vietnam still applies high tariff rates on most industries except for electronic-chemical products, which means that there is much room for improving market access through a bilateral FTA. Vietnam also preserves relatively high tariffs in textiles (11.45 percent) and transportation equipment (25.91 percent).

Two scenarios have been conducted on the revised GTAP database: (1) 50
percent trade liberalization and (2) full liberalization. In scenario 1 (“SC1”), Korea’s tariff rates on fishing and other agricultural products are reduced by 50 percent, while Vietnam’s tariff rates on machinery and transportation equipment are reduced by 50 percent. These sectors have been considered as sensitive in trade between the two countries. Therefore, the tariffs are expected to be gradually cut in the process of trade liberalization. Tariffs on other products are completely eliminated. This simulation incorporates the standard general equilibrium closure, and the results can be interpreted as the short-run impact of the agreement with Vietnam. In the second simulation (“SC2”), all tariffs are reduced to zero between two countries. This simulation can be interpreted as the long-run impacts of a Vietnam-Korea FTA on the Vietnamese economy. The term “long-run” used here does not refer to a specific amount of time. Instead, it is meant to refer to the time it takes to fully implement an FTA’s commitments. Nevertheless, it is convenient to view the long-run effects as those that are likely to occur within five to ten years of the signing of the agreement.

1. Impacts on Growth and Welfare

In the GTAP model, the analysis of the costs and benefits can be evaluated by undertaking a welfare analysis and decomposing the changes in welfare into their component parts (see Huff and Hertel, 2001). Such welfare changes come from five sources: (i) allocative efficiency, (ii) endowment effects, (iii) technical changes, (iv) terms of trade (TOT) effects, and (v) investment-savings (IS) effects. The decomposition of welfare changes in each country for the VKFTA simulation is shown in Table 5. Vietnam and Korea have welfare gains in both scenarios, in which Korea’s gain is almost four and five times that of Vietnam’s in SC1 and SC2, respectively. In both scenarios, most of the gains are from allocative efficiency, which account for over 70 percent of total welfare changes. However, gains from TOT and IS effects are different for the two countries. In Vietnam’s case, terms of trade are not the source of economic welfare gains. This is because labor and wage costs are likely to rise with free trade agreements and labor intensive exports may thus suffer from adverse terms of trade. The most important gains would, however, accrue from better allocation of resources consequent to trade liberalization. These efficiency gains would be highest through import increases.
Table 5. Effects on National Welfare

<table>
<thead>
<tr>
<th>Sources of changes (%)</th>
<th>Allocation %</th>
<th>Terms of Trade %</th>
<th>Investment %</th>
<th>Total %</th>
<th>Value (US$ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partial Scenario - SC1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>90.95</td>
<td>-4.35</td>
<td>13.58</td>
<td>100.00</td>
<td>232</td>
</tr>
<tr>
<td>Korea</td>
<td>63.21</td>
<td>45.99</td>
<td>-9.17</td>
<td>100.00</td>
<td>1022</td>
</tr>
<tr>
<td>Full Scenario - SC2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>77.39</td>
<td>14.27</td>
<td>8.41</td>
<td>100.00</td>
<td>314</td>
</tr>
<tr>
<td>Korea</td>
<td>71.65</td>
<td>35.60</td>
<td>-7.31</td>
<td>100.00</td>
<td>1545</td>
</tr>
</tbody>
</table>

One interpretation would be that Vietnam has little to gain from an agreement with Korea relative to unilateral liberalization. In Korea’s case, terms-of-trade effects are significant and investment-saving effects are even negative. These TOT effects reflect the benefits of export expansion into the Vietnamese market. In the case of full liberalization, Korea will gain more from allocative efficiency while Vietnam’s welfare gains significantly accrue from terms of trade effects. This implies that the liberalization of sectors that are considered sensitive can bring more benefits to Vietnam and Korea.

The potential impact of the Vietnam-Korea FTA on GDP is similar in the two scenarios. Given the gains in national welfare described above, one would expect the GDP gains for Korea to be high in both scenarios, but this is not the case. As shown in Figure 1, Korea’s real GDP grows by 0.1 percent in SC1 and nominal GDP by 0.3 percent, while the corresponding figures for Vietnam are 0.49 percent and 1.36 percent, respectively.

Significant gains in GDP for Vietnam occur in the long term, with nominal GDP expanding by 1.63 percent in SC2. This might be due to the economic effects from investment inflow and enhanced technical cooperation, as well as an improved allocation of Vietnam’s resources in the long run. In the short run, Vietnam consumes more with its output, which grows modestly. In the long run Vietnam consumes more not only because its terms of trade improve, but also because output increases³.

³ Simulation on GTAP database version 8.1 shows a similar pattern of changes in GDP. See Appendix 1 for details.
2. Impacts on Trade

Table 6 below summarizes the impact of the two scenarios on Vietnam and Korea’s aggregate trade. In the short-run scenario, SC1, Vietnam’s total trade volume rises by US$ 2,744.7 million or 3.89 percent (deviation from base year), while Korea’s total trade volume rises by only US$ 807.9 million or 0.14 percent. This is reasonable, because Korea has been one of the largest trading partners of Vietnam. Vietnam is not only a small economy but also a small market for Korea’s exports. The FTA between Vietnam and Korea, thus, would have a significant impact on Vietnam’s trade rather than that of Korea. When considering the full liberalization scenario, the effects on Vietnam’s trade are not significant. The volume will rise by 3.91 percent at about US$ 2.7 billion, while corresponding figures for Korea will decrease both in terms of value and percentage. This indicates the potential of trade expansion in overlapping RCA’s products, in which Vietnam has a relatively higher comparative advantage than Korea.

Table 6. Changes in Total Trade

<table>
<thead>
<tr>
<th></th>
<th>SC1</th>
<th>SC2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value (US$ million)</td>
<td>%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>2,744.7</td>
<td>3.89</td>
</tr>
<tr>
<td>Korea</td>
<td>807.9</td>
<td>0.14</td>
</tr>
</tbody>
</table>
One counterintuitive aspect of the simulation is that Vietnam imports and, especially, exports decline in a number of sectors even though tariffs are being reduced in both Vietnam and Korea. This result is evident in the data shown above, but not in the bilateral data. As shown in Table 7, imports in the two countries increase significantly in both scenarios. The value of Vietnam’s imports from Korea expands by about US$ 3.2 billion and US$ 3.5 billion in SC1 and SC2, respectively. In both SC1 and SC2, textiles, mineral and transportation imports are major items in terms of value and percentage change. Vietnam’s imports of textiles increase by almost US$ 1.9 billion, while imports of mineral and transportation products increase by approximately half of US$ 1 billion.

Table 7. Changes in Bilateral Trade (Unit: US$ million)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Changes in Vietnam Imports from Korea</th>
<th>Changes in Korea Imports from Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SC1</td>
<td>SC2</td>
</tr>
<tr>
<td></td>
<td>Value</td>
<td>%</td>
</tr>
<tr>
<td>Fishing</td>
<td>0.1</td>
<td>19.73</td>
</tr>
<tr>
<td>Mineral products</td>
<td>459.0</td>
<td>83.61</td>
</tr>
<tr>
<td>Other agricultures</td>
<td>4.0</td>
<td>58.99</td>
</tr>
<tr>
<td>Electrical and Machinery</td>
<td>277.0</td>
<td>26.46</td>
</tr>
<tr>
<td>Textiles</td>
<td>1,891.0</td>
<td>80.71</td>
</tr>
<tr>
<td>Transportation</td>
<td>248.0</td>
<td>49.21</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>87.0</td>
<td>23.97</td>
</tr>
<tr>
<td>Plastic and Rubber</td>
<td>156.0</td>
<td>21.25</td>
</tr>
<tr>
<td>Other manufactures</td>
<td>140.0</td>
<td>51.47</td>
</tr>
<tr>
<td>Services</td>
<td>1.5</td>
<td>3.60</td>
</tr>
<tr>
<td>Total</td>
<td>3,265.0</td>
<td>55.71</td>
</tr>
</tbody>
</table>

For Korea, only agricultural imports show a significant expansion as result of the VKFTA. In SC1, agricultural imports increase by US$ 668 million; however, the corresponding figure is almost doubled in SC2, US$ 1,340 million. Textiles and other manufactures also experience an increase in imports, though their values are small.
3. Impacts on Wage and Employment

In the standard GTAP general equilibrium closure, the quantity of labor is fixed and the economy is assumed to be at full employment. Changes in labor demand are resolved in two ways. First, economy-wide wages rise or fall so that the post-simulation supply of and demand for labor are equal in the economy. Second, labor resources are redistributed across the economy so that industries can accommodate changes in demand that arise from the simulation. As a result, there is no overall increase in employment from any simulation run with the standard general equilibrium closure, only in wages and the distribution of labor change.

The GTAP simulation results provide information relevant to labor: the supply price of and the firm demand for factors. The supply price of labor can be interpreted as the wage rate, while changes in demand for labor provide information on which sectors are losing workers and which sectors are gaining them. The labor component of the GTAP database is divided into skilled and unskilled labor, and simulation results are provided for both.

In general, there is not much difference between the wage rate for skilled labor and unskilled labor (Figure 2). In SC1, the wage rates of labor increase by nearly 4 percent for Vietnam and 0.3 percent for Korea. In full liberalization, the increases are somewhat larger; 3.97 percent for unskilled labor and 4.12 percent for skilled labor in the case of Vietnam. Thus it appears that the proposed FTA will raise wages in the short and long run, but that unskilled workers will benefit more than skilled workers in the long run.

The demand for labor by the various economic sectors is predicted to change, as reported in Table 8. In both scenarios, demand for the two types of labor is expected to rise significantly in the textile industry. Gains are also expected in the agricultural and service sectors. However, almost all sectors are predicted to witness decline in labor demand. Trends for unskilled labor are similar to those for skilled labor.
The GTAP scenarios likely overstate both the change in wages and the changes in the distribution of employment that would result from an FTA if there is some slack in the Vietnam’s labor market. In other words, if there are underutilized labor resources in Vietnam, the increase in wages necessary to equalize labor supply and demand would be lower than the values predicted by GTAP. Similarly, the distribution effects predicted by GTAP would be less severe if sectors such as meat, rice, textiles, apparel, and footwear are able to attract workers who are currently unemployed before attracting workers from other sectors. However, official unemployment statistics indicate that Vietnam’s unemployment rate is quite low.

Table 8. Changes in Vietnam’s Employment by Sector

(Unit: percent)

<table>
<thead>
<tr>
<th>Sector</th>
<th>SC 1</th>
<th>SC 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skilled Labor</td>
<td>Unskilled Labor</td>
</tr>
<tr>
<td>Fishing</td>
<td>-1.47</td>
<td>-1.43</td>
</tr>
<tr>
<td>Mineral products</td>
<td>-5.07</td>
<td>-4.97</td>
</tr>
<tr>
<td>Other agricultures</td>
<td>-0.90</td>
<td>-0.84</td>
</tr>
<tr>
<td>Electrical and Machinery</td>
<td>-4.14</td>
<td>-3.87</td>
</tr>
<tr>
<td>Textiles</td>
<td>11.00</td>
<td>11.26</td>
</tr>
<tr>
<td>Transportation</td>
<td>-2.54</td>
<td>-2.27</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>-4.31</td>
<td>-4.05</td>
</tr>
<tr>
<td>Plastic and Rubber</td>
<td>-2.14</td>
<td>-1.87</td>
</tr>
<tr>
<td>Other manufactures</td>
<td>-3.15</td>
<td>-2.90</td>
</tr>
<tr>
<td>Services</td>
<td>0.09</td>
<td>0.38</td>
</tr>
</tbody>
</table>
The trade liberalization that is introduced in the FTA affects trade and industrial production. An internationally competitive industry will increase exports, and the quantity of production will also rise. The estimated impacts of the Vietnam-Korea FTA on each industry are shown in Table 9. Data from Table 9 shows that Vietnam’s industrial production will shrink in almost all sectors, while Korea will witness a slight decrease in industrial output in five of ten sectors. However, the aggregate output of industrial production will increase for Vietnam in both scenarios, which are 5.02 percent and 5.53 percent, respectively.

<table>
<thead>
<tr>
<th>Sector</th>
<th>SC 1 Vietnam</th>
<th>SC 1 Korea</th>
<th>SC 2 Vietnam</th>
<th>SC 2 Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing</td>
<td>-0.85</td>
<td>0.05</td>
<td>-0.98</td>
<td>0.11</td>
</tr>
<tr>
<td>Mineral products</td>
<td>-3.54</td>
<td>0.42</td>
<td>-3.71</td>
<td>0.38</td>
</tr>
<tr>
<td>Other agriculture</td>
<td>-0.47</td>
<td>-0.44</td>
<td>0.00</td>
<td>-0.86</td>
</tr>
<tr>
<td>Electrical and Machinery</td>
<td>-3.81</td>
<td>-0.81</td>
<td>-3.79</td>
<td>-1.04</td>
</tr>
<tr>
<td>Textiles</td>
<td>11.34</td>
<td>5.42</td>
<td>10.88</td>
<td>5.61</td>
</tr>
<tr>
<td>Transportation</td>
<td>-2.21</td>
<td>-0.34</td>
<td>-3.26</td>
<td>-0.17</td>
</tr>
<tr>
<td>Iron and steel</td>
<td>-3.99</td>
<td>-0.58</td>
<td>-3.78</td>
<td>-0.73</td>
</tr>
<tr>
<td>Plastic and Rubber</td>
<td>-1.80</td>
<td>-0.07</td>
<td>-2.05</td>
<td>-0.13</td>
</tr>
<tr>
<td>Other manufactures</td>
<td>-2.82</td>
<td>0.35</td>
<td>-3.70</td>
<td>0.70</td>
</tr>
<tr>
<td>Services</td>
<td>0.44</td>
<td>0.05</td>
<td>0.58</td>
<td>0.09</td>
</tr>
<tr>
<td>Total</td>
<td>5.02</td>
<td>0.15</td>
<td>5.53</td>
<td>0.22</td>
</tr>
</tbody>
</table>

As for specific sectors, there was an extremely substantial expansion of the textile industry when Vietnam and Korea signed the FTA. This is partly because low-cost intermediates resulting from import liberalization lower the cost of production; partly because Vietnam has a clear comparative advantage in labor-intensive sectors against Korea, whereas its competitive position for these commodities is less clear within ASEAN.

The next largest changes are in the service sector in Vietnam and the mineral sector in Korea. Korea also expects a gain in the manufacturing sector, which will increase from 0.35 percent in SC1 to 0.70 percent in SC2. For Vietnam, the full liberalization scenario will bring positive changes in agricultural sector. However, most sectors will experience a larger shrinkage in their production output. This can be explained by the dependence of Vietnam’s economy on input from Korea. This also means that the Vietnamese economy will grow by expanding the production
of competitive industries, while structurally adjusting industries which are less competitive. Overall, these results imply that the VKFTA will affect Vietnam’s industrial production substantially. There will be pressure for the Vietnamese industry to restructure after the signing of the FTA. However, one might expected that the dependence of Vietnam’s industrial production on Korea’s input would be more severe as a result of the VKFTA.

IV. SENSITIVE PRODUCTS AND ASEAN COMPARISON

For several reasons that are now well articulated in current negotiations, agriculture is very important to both Korea and Vietnam. For Vietnam, it represents the main source of employment, accounting for nearly 60 percent of total employment. In addition to employment, agriculture also plays a key role in Vietnam’s economic growth profiles. At the same time, agriculture exports account for a sizeable proportion of export revenues in Vietnam. For Korea, agriculture has been the most sluggish sector of the economy. Korea, therefore, prohibited unrestricted beef and rice imports and severely limited many other agricultural imports. These reasons explain the importance of the agricultural sector in the two countries in the context of the Vietnam-Korea FTA. Improving the current conditions of the international markets in agricultural products and giving more attention to their concerns could lead to better integration of the two economies and promote economic growth and cooperation.

The aim of this section is to precisely assess the potential impact of the VKFTA on both countries’ agriculture sectors. A comparison of the quantitative economic impacts among ASEAN members versus Korea is also assessed because Vietnam, Korea, and ASEAN countries have been currently implementing their commitments via the Korea-ASEAN FTA. For this purpose, data on regions have been categorized into 8 sub-regions; Korea, Vietnam, Singapore, Thailand, Malaysia, Indonesia, Philippines, and the Rest of World, and all sectors have been aggregated into detailed agricultural subsectors, manufactures, and services. Due to the progress of the AKFTA implementation, we consider a scenario in which tariffs on the agricultural imports of Korea and other ASEAN members are reduced by 80 percent, while other sectors receive full liberalization. For Vietnam and Korea, all tariffs are reduced to zero between the two countries.

Vietnam’s tariff rates are in general lower than the tariff rates of ASEAN
countries (Table 10). Vietnam’s highest rates can be found in vegetables, animal, and meat products. Especially, Vietnam has zero percent duty rates for rice and dairy products. Such tariff data suggests that both Vietnam and Korea will experience significant reductions in agricultural protection following the conclusion of the FTA between Vietnam and Korea. It also appears that there will be an asymmetrical market opening in manufacturing sectors, with Korean manufacturers benefiting from a greater increase in access than Vietnam’s manufacturers. The duty reductions in the manufacturing industries could serve as a double-edged sword for Vietnam’s manufacturers, who would benefit on the one hand from cheaper input costs, but potentially lose on the other hand due to increased competition from Korea.

Table 10. Korea’s Average Tariffs on Imports from ASEAN
(Unit: percent)

<table>
<thead>
<tr>
<th>Sector</th>
<th>VNM</th>
<th>THA</th>
<th>MYS</th>
<th>PHL</th>
<th>IND</th>
<th>SGP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries</td>
<td>19.9</td>
<td>19.5</td>
<td>21</td>
<td>22.3</td>
<td>19.4</td>
<td>12.1</td>
</tr>
<tr>
<td>Animal products</td>
<td>11.7</td>
<td>6.94</td>
<td>15.6</td>
<td>4.42</td>
<td>6.16</td>
<td>5.14</td>
</tr>
<tr>
<td>Grains</td>
<td>3.22</td>
<td>3.81</td>
<td>623</td>
<td>2.41</td>
<td>3.37</td>
<td>0</td>
</tr>
<tr>
<td>Rice</td>
<td>0</td>
<td>450</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meats</td>
<td>29.8</td>
<td>23</td>
<td>0</td>
<td>57.8</td>
<td>6.55</td>
<td>20.9</td>
</tr>
<tr>
<td>Vegetables</td>
<td>688</td>
<td>14</td>
<td>71.6</td>
<td>30.4</td>
<td>592</td>
<td>56</td>
</tr>
<tr>
<td>Other crops</td>
<td>3.38</td>
<td>12.6</td>
<td>11.2</td>
<td>17.3</td>
<td>8.67</td>
<td>51.1</td>
</tr>
<tr>
<td>Dairy</td>
<td>0</td>
<td>42.1</td>
<td>57.4</td>
<td>0</td>
<td>59.7</td>
<td>107</td>
</tr>
<tr>
<td>Food</td>
<td>16.8</td>
<td>35.7</td>
<td>14.9</td>
<td>26.8</td>
<td>11.2</td>
<td>38.3</td>
</tr>
<tr>
<td>Forestry</td>
<td>4.01</td>
<td>4.42</td>
<td>1.4</td>
<td>4.54</td>
<td>2.55</td>
<td>2.45</td>
</tr>
<tr>
<td>Manufactures</td>
<td>6.73</td>
<td>4.19</td>
<td>2.83</td>
<td>1.49</td>
<td>3.39</td>
<td>1.85</td>
</tr>
</tbody>
</table>

Note: Country code: VNM-Vietnam, THA-Thailand, MYS-Malaysia, PHL-Philippines, IND-Indonesia, and SGP-Singapore
Source: GTAP V.7 database

1. Impact on Welfare and Growth

Figure 3 shows the welfare gain for Vietnam and ASEAN-5 countries. Overall, Vietnam’s welfare gain is substantially greater than the welfare gain predicted for the ASEAN-5. The largest source of gain in Vietnam’s welfare comes from better allocation of resources consequent to trade liberalization, whereas the main
source of welfare gain for ASEAN come from TOT (Thailand, Philippines, and Indonesia). Malaysia, the Philippines, and Singapore also gain from saving and investment efficiency. This means that the Vietnamese economy is likely to be inefficient in terms of resource allocation compared with ASEAN-5. In addition, Vietnam’s welfare gain from TOT and IS accounts for a relatively smaller share of total gain than that of ASEAN-5. Thus, it can be said that Vietnam might not be able to compete with ASEAN-5 in accessing the Korean market in the context of the AKFTA.

Regarding economic growth rates, Vietnam achieves the largest growth rate among ASEAN countries (Figure 4). Vietnam’s real and nominal GDP will increase by 0.73 and 1.07 percent as a result of simulation, respectively. Note that the simulations include the loss of revenues given the tariff fall. Vietnam’s GDP growth comes mainly from the improvement of resource allocation. In the case of the ASEAN-5, Thailand has a similar pattern of growth rate to Vietnam. The rest of the ASEAN-5 have their aggregated GDP slightly increased, or even decreased as a result of liberalization.

Figure 3. Changes in Welfare: Vietnam and ASEAN-5
2. Impact on Trade

As a result of the proposed liberalization scenario, there is significant interest in Vietnam regarding the potential shifting of exports from Vietnam to other ASEAN countries, particularly Thailand. Table 11 reports the change in ASEAN’s exports to Korea by sector. The data demonstrates that Vietnam’s exports to Korea increase significantly in food, vegetables, and fisheries. However, these sectors also show export increases in other countries. For example, fisheries exports from Thailand and the Philippines increase by US$ 3.6 million and US$ 9.1 million, respectively, compared with Vietnam’s US$ 3.7 million. As for the food industry, exports from Thailand are the largest in terms of volume, and other ASEAN-5 countries also display a considerable increase in this sector. Vietnam is the world’s second largest exporter of rice; however rice exports to Korea show a decline as result of trade liberalization. Thailand, instead, will gain from this product category.
Table 11. Changes in Bilateral Exports to Korea

(Unit: US$ million)

<table>
<thead>
<tr>
<th>Sector</th>
<th>VNM</th>
<th>THA</th>
<th>MYS</th>
<th>PHL</th>
<th>IND</th>
<th>SGP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries</td>
<td>3.7</td>
<td>3.6</td>
<td>0.4</td>
<td>9.1</td>
<td>0.9</td>
<td>0.1</td>
</tr>
<tr>
<td>Animal Products</td>
<td>0.5</td>
<td>0.1</td>
<td>0.5</td>
<td>0.0</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Grain</td>
<td>0.6</td>
<td>7.4</td>
<td>1.5</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Rice</td>
<td>-0.4</td>
<td>116.9</td>
<td>-0.4</td>
<td>-0.2</td>
<td>-0.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Meat</td>
<td>0.6</td>
<td>30.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Vegetables</td>
<td>55.8</td>
<td>-1.2</td>
<td>0.4</td>
<td>15.1</td>
<td>12.8</td>
<td>0.0</td>
</tr>
<tr>
<td>Other Crops</td>
<td>3.2</td>
<td>2.0</td>
<td>3.0</td>
<td>0.4</td>
<td>3.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Dairy</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>1.4</td>
<td>4.0</td>
</tr>
<tr>
<td>Food</td>
<td>80.0</td>
<td>158.0</td>
<td>7.4</td>
<td>25.0</td>
<td>16.6</td>
<td>17.9</td>
</tr>
<tr>
<td>Forestry</td>
<td>0.6</td>
<td>0.1</td>
<td>0.8</td>
<td>0.0</td>
<td>0.1</td>
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</tr>
<tr>
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<td>2.0</td>
<td>0.7</td>
<td>0.9</td>
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<tr>
<td>Total</td>
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<td>702.0</td>
<td>246.0</td>
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V. CONCLUSION AND POLICY IMPLICATIONS

Korea is a very attractive integration partner for Vietnam, compared to other countries, thanks to its market size, bilateral trade and investment pattern, and the stability of its macroeconomic environment. It has been one of Vietnam's largest trading partners and principal source of imports and foreign investment for the last two decades. In an ex ante analysis, this study identifies several benefits and a few possible drawbacks for Vietnam’s economy as a result of the FTA between Vietnam and Korea.

The GTAP simulation results show that the Vietnam-Korea FTA is expected to boost Vietnam and Korea’s economic welfare gains in both liberalization scenarios. The largest economic welfare gains are from allocative efficiency, which account for over 70 percent of total welfare changes. For Vietnam, terms of trade are not the source of economic welfare gains. The most important gains would however accrue from better allocation of resources consequent to trade liberalization. Given the gains in economic welfare described above, one would expect the GDP gains for Korea to be higher, but this is not the case. As predicted by GTAP, in the long run, Vietnam’s GDP will expand by 1.63 percent. This might be due to economic effects from investment inflow and enhanced technical cooperation, as
well as an improved allocation of Vietnam’s resources in the long run. In terms of production output, the VKFTA produces mixed effects on different sectors in Vietnam. In the case of specific sectors, the textile industry expands by a substantial degree when Vietnam and Korea sign the FTA. The impact of the VKFTA on trade shows that Vietnam’s export gains are concentrated on agriculture, fisheries, and textiles. Trade liberalization also reduces the level of unemployment in the member regions. It appears that the proposed FTA will raise wages in the short and long run, but that unskilled workers will benefit more than skilled workers in the long run. This study yielded comparable and similar results compared with the few studies dealing with the impact of the VKFTA.

Based on the analysis results, the implications for Vietnam’s policy are as follows.

Free trade agreements are important for economic development. Trade liberalization helps create bigger, more efficient, attractive and dynamic markets, thereby benefitting the economy at large. However, FTAs between countries with different levels of economic development, such as Vietnam and Korea, may damage the lesser developed country, which would be, in this case, Vietnam. Therefore, the challenge for Vietnam is to find the right balance between liberalization and development, and the right time to open up the market. Basically, the VKFTA must ensure the principles of reciprocity and mutual benefits for both sides. A developing country like Vietnam will not be able to implement broad liberalization. On the other hand, market access gains for Vietnam may be limited if Korea’s agricultural subsidies are not reduced; restrictive rules of origin, technical barriers to trade (TBTs) such as quality standards and supply-side constraints also limit the possible gains from improved access to the Korean market.

Another important goal of Vietnam’s trade policy is to raise the value-added of its natural resource exports, through which it could enter various niche markets. If Vietnam seeks to expand exports of agricultural and processed food products, it should offer the reduction of tariffs for processed foods in exchange of a reduction of tariffs on agriculture and processed foods from Korea. Vietnam should move toward exporting processed natural resources that require the use of high-level technology, in order to be less dependent on the fluctuating prices of natural resources, so as to benefit from positive externalities, and enhance growth rates in the long run.
Korea’s tariff escalation within an FTA does not impede exports of all types of processed goods, but certainly affects some export products in which Vietnam holds a natural comparative advantage. Given that products on Korea’s sensitive list are major exporting items for Vietnam, thus making tariff elimination negligible, Vietnam should provide incentives to encourage Korean investments in these industries. The Vietnamese government might consider launching a campaign raising awareness among Korean investors that Vietnam could be an investment “hub” to distribute products in a number of countries, enjoying the preferential treatment Vietnam products benefit from when exported to other FTAs members.

In the context of the VKFTA, it is likely to be more difficult for Vietnam to compete in the Korean market with other ASEAN countries that have relatively higher competitiveness in key industries. The analysis results show that the sectors substantially increasing exports to Korea under the VKFTA compared to the rest of ASEAN are worth noting. For example, while agricultural exports to Korea are likely to rise significantly in the long run, those from ASEAN are also expected to increase; the same trend applies to fishery, processed food, and other manufacturing products such as textiles and apparels, leather, electronics and transport equipment. Thus, an earlier conclusion of a comprehensive FTA with Korea would be a good strategy for Vietnam to avoid direct competition with ASEAN members in the future.

The limitations of this research may include the following aspects. First, although this study has examined numerous aspects of potential impacts of the Vietnam-Korea FTA by applying CGE methods, the results are limited mainly due to the characteristics of applied models and data. Second, although the scale and complexity of the CGE modeling system require that the selection of functional forms and closure rules are transparent, simple and straightforward as a whole, there is no proper facility to substantiate that they are appropriately chosen for specific types of economies. Finally, present research does not include the possible economic effects from other forms of economic cooperation beyond trade issues. Therefore, it is worth incorporating these dynamic impacts in future studies.
APPENDIX 1. Effects on GDP Growth

Source: This figure was gratefully provided by an anonymous referee using the GTAP version 8.1.
REFERENCES


A Comparative Study on the Self-help Approach in Rural Development between Vietnam’s New Rural Development and Korea’s Saemaul Undong*

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Vietnam’s “Doi Moi”, initiated in 1986, translated to high economic growth and rapid urbanization for the country, but also widened the gap between rural and urban areas. Vietnam’s National Target Program on New Rural Development for 2010-2020 was aimed at developing the rural economy and improving the living standards of rural people, but after five years the urban-rural gap remains substantial. Two of the main reasons are the lack of investment capital and lack of effective ways to mobilize community involvement. In contrast, during the 1970s, rural areas in Korea experienced huge improvements under the “Saemaul Undong” movement. The program’s success at promoting sustainable development in Korea’s rural areas has inspired rural programs in other developing countries. In this paper, we compare and contrast the two movements to provide explanations for the different results between the two countries. Based on this analysis, and policy implications stemming from it, we recommend resource mobilization strategies to change villagers’ attitude and increase their involvement in Vietnam’s rural development movement, aligning with the inclusivity principle “people know, people discuss, people do and people check”.

**Keywords**: Village, Rural, Rural Economics, Comparative Country Studies, Development  
**JEL classification**: O2, O18, O57

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I. INTRODUCTION

Rural development has always interested policymakers, scientists and experts in both developing and developed countries. Since the introduction of Vietnam’s Doi Moi policy in 1986, Vietnam has witnessed high economic growth accompanied by rapid urbanization. According to the General Statistics Office of Vietnam (GSO, 1990 and GSO, 2010), however, the percentage of total Vietnamese living in rural areas decreased from 80.7% to only 69.5% in 2010—about 0.8 percentage points per year. This has raised significant concerns about the pace of improvements in living standards in rural Vietnam. In 2010, the average income of rural people was approximately USD $80, two times lower than that of urban inhabitants, while the poverty rate in rural areas was 17.4%, four times higher compared with urban areas (GSO, 2011). Additionally, rural people in Vietnam have limited access to adequate infrastructure and high-technology farming methods, and human resource quality remains low. These have been barriers to improving quality of life in rural areas.

The Government of Vietnam’s National Target Program on New Rural Development (NRD) for 2010-2020 is one of 16 National Target Programs. Mr. Le Huy Ngo, Minister of the Ministry of Agriculture and Rural Development (MARD), initiated NRD, which aims to develop Vietnam’s rural economy and improve the living standards of rural people. After nearly five years, NRD has improved quality of living for rural people by some measures. According to GSO (2014), the average income of rural people increased 1.9 times compared to 2010, and the rate of poor households decreased 1.65% per year during 2010-2014 to 10.1%. In addition, the program has upgraded infrastructure with more than five thousand construction sites nationwide. However, the gap between the program’s targets and actual outcomes is wide. Two main reasons are the lack of investment capital and the ineffective mobilization of community involvement, problems common to many developing countries.

Capital allocated for NRD programs from 2011-2014, of about USD 23 billion, represented 25% of the total capital allocated for the program. Loans make up the biggest part, accounting for 57.2% of total capital, with community contributions totaling only 10% (MARD, 2015). We found that a large number of rural people have not even heard about NRD, implying that external resources play a significant role in NRD implementation. Rural inhabitants should have ownership of
NRD, according to the slogan of the program: “People know, People discuss, People do, People monitor for the benefit of rural people themselves”. This is similar to the slogan of the Saemaul Undong movement (SU) in Korea, where the slogan “Diligence, Self-help and Collaboration” encouraged people to participate proactively in rural development.

One way to foster the success of the NRD program is to better mobilize internal resources, especially community contributions, because there is little room for mobilizing resources from the state budget due to a high budget deficit and public debt. Currently, the budget deficit is above 5.7% of GDP, higher than the planned objective of 5% of GDP; public debt has increased quickly to 61.4% in 2015 (Vietnam National Assembly, 2015). The trend will further continue, driving the top concern of the Vietnamese government. Capital mobilization from the private and foreign direct investment (FDI) sectors will face many difficulties due to high risk, as well as the low and slow returns from agriculture and rural development investment. Meanwhile, resources within households have not been effectively utilized. Moreover, the household saving rate has been relatively high, at 14.4% GDP in the period 2011-2015 (Vietnam National Assembly, 2015) and according to the Central Institute for Economic Management (2012), about 60% of rural households have their own savings fund. Therefore, in the case of Vietnam, one solution is to mobilize community contribution for the successful implementation of the NRD movement.

This study compares and evaluates the Saemaul Undong, launched in Korea in the early 1970s, to Vietnam’s NRD. Based on the research, we recommend policies to improve the proactive contribution of villagers to rural development in Vietnam.

We chose the Saemaul Undong because of its success in mobilizing community participation to bring about revolutionary change in Korean village life. In addition, we see a number of socio-economic similarities between Vietnam in 2010 and Korea in the 1970s: Vietnam’s GDP per capita reached nearly US$ 1,800 in 2012, about the same level as Korea’s in 1979, while literacy rates in Korea reached 90% in the late 1950s, similar to Vietnam’s above 90% in 2011 (GSO, 2012).

However, the main difference between the two countries is in policy priorities. From the outset, all Korean government policies under the administration of President Park directed the Korean economy away from import substitution and toward export-oriented industrialization. Moreover, President Park paid preferable attention on agriculture policies to improve the living standards of rural people.
In contrast, the Vietnamese government considers both agriculture and industry as strategic sectors; however, policies for agriculture development have not lived up to their importance in Vietnam’s sustainable development.

This paper consists of five sections: I) Introduction, II) Theoretical Approach and Review of Literature, III) Methodology, IV) Comparison of NRD and SU, V) Conclusion.

II. THEORETICAL AND LITERATURE REVIEW

1. Theoretical review

The first use of the term “community development” was in 1948 during a British Colonial Office conference in Cambridge on Development of African Initiatives (HoldCroft, 1978). Rural development approaches have experienced many changes since then. Two main approaches to community participation emerged: one approach focuses on external assistance, while the other focuses on resources within a community.

External approach: The external, or “Need-Based Community Development,” approach evaluates problems within a community and then seeks to attract external resources to meet needs. This approach has led to significant consequences: communities began depending on external resources, dampening local effort to find solutions, and suppressing community problem-solving capacity (McKnight and Kretzmann, 1996; Green and Goltting, 2010). It also has negative effects on local community leadership decisions. Instead of encouraging people and utilizing internal resources in the community, local leaders highlight or even exaggerate village problems and deficiencies to get resources from outsiders. This weakens neighbor-to-neighbor support links, replaced by linkage to experts, social workers and funders. This approach can never lead to serious change in community development.

Internal approach: The most popular internal approach is “Asset-based Community Development” (ABCD), an alternative to the needs-based approach. Kretzmann and McKnight first mentioned the approach in 1993 in their book Building Communities from the Inside Out: Asset-Based Community Development. In contrast with the external approach, ABCD points out that a community can drive development through identifying and mobilizing available assets, and then creating local economic opportunities. These assets can come in various forms,
including individual and community talent, skills, and even social relationships. ABCD looks at brighter, positive, and optimistic aspects rather than at problems. The approach focuses on fostering development through community resources rather than by external resources. Kretzmann and McKnight (1993) also proposed a series of basic steps to motivate community participation: 1) collect successful stories, 2) organize a core group, 3) map the capacities and assets of individuals, associations and local institutions, 4) build a community vision and plan, 5) mobilize and link assets for economic-socio development and leveraging activities and resources from outside the community. The main challenges in the ABCD approach are how to motivate domestic processes to prevent dependence on outside resources; how to motivate and include community-wide participation, including women and poorest people; and how to improve community leadership.

Another popular internal approach targeting the poor is Community-Driven Development (CDD), which comes from the World Bank and has been under Community-Based Development (CBD) projects in which communities have direct control over main project decisions, management of investment funds and supervision. According to ADB (2006), CDD projects have five possible defining characteristics related to the project cycle, namely community focus, participatory planning and design, community control of resources, community involvement in implementation, and community-based monitoring and evaluation. According to Mansuri and Rao (2003) and ADB (2006), the benefits that CDD brings are various. This approach promotes equity and inclusiveness, efficiency, and good governance (greater transparency and accountability in allocation and use of resources). Moreover, the allocation of development funds meets the demand of the poor in a manner that places more emphasis on the process of empowering poor people (Coirolo et al., 2001; Narayan and Petesch, 2002). In the latter half of the 1990s, CDD was one of the fastest-growing mechanisms for development assistance and investment lending in various development organizations. However, there remain several strong criticisms of the CDD approach. Mansuri and Rao (2003) found several qualitative evidence to indicate the limitations of the CDD approach in practice, specifically (i) poverty reduction could be limited due to information gaps or concerns of political economy. Several CDD projects have been not well targeted to the poor; (ii) many projects have not shown a clear creation of effective community infrastructure or improvement of welfare outcomes; (iii) the sustainability of CDD crucially depends on external agents, which requires an institutional
environment and accountable leaders. In addition, the approach attracted some criticisms from ADB (2006). ADB divided these criticisms into three categories, namely conceptual, practical, and institutional. Conceptually, CDD includes complex contextual concepts like “community,” “empowerment,” “participation,” and “social capital,” with an absence of careful interpretation, which can crowd out the poorest communities. In practice, these limitations include the challenge of scaling up CDD, the limits to targeting by political interference, the subproject cycle being too short for sufficient empowerment. Institutionally, key criticisms indicate that CDD projects require higher costs of preparation; it is difficult to monitor safeguard and fiduciary compliance; and prior economic analysis for the project is impossible. In sum, the implementation of the CDD approach requires careful and flexible planning.

The Saemaul Undong (SU), or the New Village Movement which started in Korea during the 1970s, is a typical and successful example that applies the CDD approach. Its greatest strength is the voluntary participation of most rural villagers in Korea. A set of rules that contributed to the social participatory aspects of SU are institutionalized coordination between the government and civilian sectors, empowerment of women, the Saemaul education system encouraging self-improvement through voluntary participation, and the endorsement of favorable national policies for rural development (Han, 2012; Kim, 2012; UNDP, 2015). SU not only provides policy makers and practitioners with background knowledge of the SU and its application, but more importantly, it showcases experiences of the CDD project and provides useful lessons for ongoing CDD projects in many developing economies in Asia and Africa. Moreover, the UNDP (2015) has considered SU as an “Inclusive and Sustainable New Communities” model to update, integrate and scale up factors of SU’s application into an exemplary systematic approach for development cooperation. The model highlights the concept of communities out of scope of rural areas to urban ones. This model tackles the challenges that communities face in the process of fast urbanization when young people in villages tend to emigrate to urban areas for job opportunities, hence resulting in urban congestion and the further contraction of rural areas.

2. Literature review

Researchers have studied community mobilization in Korea intensively. The
Saemaul Undong (SU)-known as the “recipe for Korean rural development”-is a special model because of its unique features and the spillover effects that its success story has on developing countries.

1) Studies on resource mobilization under a tures and ea intensively

Korea government launched the Saemaul Undong as a New Village Movement in 1970, when rural areas lagged in comparison with the development of the country as a whole. One of the key successes of SU was that it planted the seed of the “self-help spirit” or “can-do spirit”. The outstanding achievements of SU must credit some external factors, especially the leadership and efficient organization of the Korean government. In general, the SU model integrated external and internal rural community development approaches, utilizing creative innovations. SU avoided the flaws of the external approach by refraining from heavy dependence on resources from outside, and villages had to perform well to receive continued support. We explore factors that contributed to the SU “miracle” below.

First, strong leadership was important, especially in the first phase of SU. Many analyses show that the implementation of the national campaign depended heavily on the dictatorial leadership of President Park (Han, 2004; Kwon, 2010; Yoon and Mudida, 2015). Han (2012) highlighted the decisive role of village leaders in the success of SU in the 1970s, especially these leaders were unpaid for what they did. This included the strict conditions of the SU programs which stipulated that the government would only support villages that display a willingness to help themselves (Jwa, 2015).

Second, the proactive and voluntary involvement of each village and individual played an important role. As highlighted by President Park Chung Hee “Unless the residents have a desire to help themselves change their own lives, there will be no change even if they wait 5000 years. If the village residents seek, right away, to change their lives, with just a little government support, they can change their lives in 2-3 years” (Han, 2012). This represented a huge change in perspective since, up to the 1960s, the many foreign experts that had visited rural villages in Korea had characterized villagers as lazy and helpless (Jwa, 2015).

Third, efficient implementation made a significant contribution toward results. Simple goals and directions targeted rural people, and the SU units were kept as
small as possible. A village unit of about 460 people\(^1\) each independently decided how to implement each project. As a result, throughout the 1970s, community contribution gradually increased until it began to outweigh government support by the end of the SU period. SU utilizes the advantages of the internal approach by focusing on resources within the community. Rural people created wealth and happiness for themselves, and by themselves, eagerly and proactively.

Fourth, SU created competition among villages by following a differentiated support principle (Jwa, 2015) by “rewarding high performance and penalizing low performance”. In 1970, the initial year of the movement, the government supported each of the nation’s 33,267 rural villages with 335 bags of cement to carry out projects with the participation of rural people. However, in 1972, government support only went to 16,600 villages with better performance in the first year of implementation (Kim, 2013). Moreover, from 1973, the government divided villages into three groups based on performance, providing preferential support to more successful villages (Douglas, 2013; Jwa and Yoon, 2012; Chung, 2009; Kim, 2009; Kim, 2005; Ministry of Home Affairs of Korea, 1980). This prevented moral hazard, creating a strong atmosphere of competition and incentives among villages.

Fifth, preparations before launching SU helped fit the program into the Korean context. Two important reforms facilitated favorable conditions for the implementation of SU: 1) comprehensive land reform from 1948-1951 and the 1949 New Land Reform Act (Yoon and Mudida, 2015; Reed, 2010; Lee, 1995; Wade and Kim, 1978), and 2) heavy government investment in human capital, which the government accelerated in the 1960s (Reed, 2010).

SU’s success has created spillover effects in many countries. Persuaded by the SU success story, some Korean universities have opened SU-related departments. Many developing countries send students and officials to Korea to learn about SU, and Asian, African and Latin American countries have applied lessons from the SU model. Myanmar and Korea signed a memorandum of understanding (MOU) on cooperation for the launching of the Saemaul Undong in August 2013. Korea will support Myanmar in establishing the Myanmar Saemaul Undong Academy, to educate leaders and professionals. The government of Lao is gearing up for an integrated rural development project applying SU’s participatory

\(^{1}\) Korean Statistical Information Service(KOSIS), 2016
approach, concentrating on improving the income of households by providing villagers with information on agriculture technology and agribusiness models, and building an SMU Training Center. Cambodia and Korea launched an inception ceremony for the “Self-Supporting Rural Development Project with Saemaul Undong’s Participatory Approach” in 2015. Cambodia will also establish an SU Training Center in Kampong Speu Province for central and local government officials, village leaders and rural people to enhance their capacity on leadership and agriculture techniques. The Democratic Republic of the Congo established its 1,075-member “Congo Saemaul Undong Center” in 2004 in Kinshasa, the country’s capital. Uganda and Tanzania also initiated an SU movement in 2009 after representatives from both countries visited Korea’s SU Center. Vietnam has implemented some Saemaul Projects, such as the Cow Bank Project in three villages from 2002 to 2007, and the Saemaul Project for Developing Agriculture Value-Chains in two villages in Ninh Thuan Province during 2014-2017. Inspired and persuaded by the SU stories, we choose the SU approach as a better way to motivate Vietnamese rural people to improve living standards.

2) Studies on resource mobilization for NRD

Most studies only focus on evaluating the achievements and drawbacks of Vietnam’s NRD, overlooking obstacles limiting the implementation of NRD. None of these studies evaluated SU approaches for suitability in rural development in Vietnam. Some studies mentioned capital and community mobilization to develop agriculture, help farmers, and improve rural areas, but they concentrate on specific provinces or regions (Tien Dinh Nguyen, 2012; Ngoc Luan Nguyen, 2012; Duc Thanh Nguyen, 2008). Tien Dinh Nguyen studied the theoretical background and proposed policies for mobilizing domestic help from people living in the mountainous North Vietnam. Ngoc Luan Nguyen researched experiences in mobilizing community resources to build new rural areas. Duc Thanh Nguyen analyzed factors affecting investment in agriculture. Other studies concentrate on investment on agricultural production, but these studies did not assess mobilization of internal resources or participation by people.
III. METHODOLOGY

In this research, we apply multimethod research as follows:

- **Survey research:** We implemented a small survey to get more ideas from people and leaders of communes about mobilizing community involvement for NRD. (Appendix 1)
  
  We constructed two types of questionnaires: One type for commune people, and the other type for leaders of the commune. A total of 60 questions cover the comprehensive aspects of NRD. The sample size consists of 200 people, including 50 leaders and 150 people.
  
  The questionnaire for people includes five main parts: opinions, contribution of money and land, two parts covering monitoring & evaluation of NRD implementation, and the last part covering issues related to policy implications.
  
  The questionnaire for leaders covers three main parts: the first two on how leaders can encourage and persuade people to participate and contribute to NRD, and the final part asking leaders to give advice on solutions.

We surveyed some communes in the North and some provinces in the South to broaden the understanding of NRD. In the North, we talked with and interviewed people and leaders in Phu Dien, Xuan Dinh, Thanh Tri, Bat Trang and Xuan Duong communes. In the South, we surveyed areas such as Long Hoa, Ham Ninh, Cua Can, Thanh An and Condao.

We implemented the survey across three months from October to December 2013. It was found that the characteristics of respondents in the survey were in general similar with that of the rural people nationwide. For example, male and female respondents accounted for respectively 46% and 54% of the total, approximate to the sex ratio of the rural population in Vietnam.² The average age was about 42 years. The average income of respondents was about VND 24 million, equivalent to that of people living in the rural area.³ We also interviewed people who engaged in many kinds of economic activities, which were also popular jobs in rural areas in Vietnam at that time such as:

² According to GSO (2014), the sex ratio (male/female) of the rural population is 49% /51%.
³ According to the Report on “Implementation Results of the National Target Program on New Rural Development up to June 2015”, the average income of rural people is about VND 24.4 million.
farmers, people working in social associations, teachers, businesspersons, officers, freelancers, and homemakers.

- Expert method: discussions with Vietnamese experts, including officers in the NRD Central Steering Committee and Korean experts from the KDI school of Public Policy and Management, helped us gain a comprehensive understanding of NRD and SU.
- Analysis and synthesis method: to analyze theoretical background and practice on resource mobilization for implementing NRD and SU.
- Comparison method: We used comparative country studies to identify similarities and differences in resource mobilization between SU and NRD.
- Descriptive method: Analyzing data from NRD official reports and studies on SU.

IV. THE DEVELOPMENT OF NRD AND SU

People cited similarities between Vietnam and Korea at the onset of the NRD program. The ultimate goal of both SU and NRD is to raise quality of life and well-being for rural people, thus narrowing the urban-rural gap. However, the two projects achieved different outcomes. NRD’s goals are difficult to achieve due to the ineffectiveness of community participation. By contrast, effective community-based mobilization played an extremely important role in SU’s success. Comparison between NRD and SU in terms of self-help mechanisms sheds light on the differences between the two programs.

1. General overview of NRD

General objectives of NRD target not only rural people directly, but also other fields of national development. The Vietnamese government considers NRD, with 9,000 rural communes nationwide (2010 to 2020), as part of its overall socio-economic, political, and security and defense programs. The general objectives of NRD are to:

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4 The Korean government implemented SU in the 1970s, while the Vietnamese government rolled out NRD in the 2010s.
5 The Prime Minister’s Decision No.800/QD-TTg dated June 4, 2010.
- Build a new countryside with gradually modern socio-economic infrastructure, rational economic structure and forms of production organization.
- Associate agriculture with the quick development of industries and services, and rural with urban development planning.
- Assure a democratic and stable rural community deeply imbued with a national cultural identity.
- Protect the eco-environment and maintain security and order.
- Raise the quality of life in rural areas under socialist orientation.

NRD includes 11 groups of activities to achieve these goals. In addition, the NRD Central Steering Committee assesses the achievements of the activities based on a national set of 19 criteria. To receive recognition as a new commune, a commune must complete these 19 criteria.

Figure 1: The 11 Activity Groups of the New Rural Development Program


6 In Vietnam, socialist orientations of the market economy include: 1) the fulfillment of the objective of a “prosperous people, strong country, democracy, equity and civilization”; 2) development of the economy with different forms of ownership and economic sectors, where the state economy plays the decisive role, and the state economy together with the collective economy serve as a foundation for the national economy.

7 The Prime Minister’s Decision No.491/QD-TTG dated April 16, 2009 on the national set of criteria on new rural development ranks 11 communes in the pilot program for new rural development.
2. General overview of SU

In 1970, the Park Chung Hee government in Korea initiated the New Village Remodeling Movement as the national community-based program for rural areas. Then in 1972, the government changed the name of the movement to SU and declared the SU policy to be of highest priority. The clear and direct goals of SU were to increase income for villagers. This movement also aimed to modernize infrastructure, reforest mountainous areas and improve the rural environment for rural people and rural community (Han et al., 2013; Chung, 2009). Moreover, it emphasized changing the attitudes of rural people based on the basic spirit of “We can do it. We will do it”. Government aid would be useful only if rural people endeavored to improve their living standards by themselves and in cooperation with others in their community. The three central social values of SU were diligence, self-help, and cooperation, with additional government support and assistance (Chung, 2009).

3. Main directions and implementation

1) Economic direction

Both movements aimed to increase income and reduce poverty in rural areas. However, the study shows the difference in economic direction between NRD and SU. Vietnam’s implementation of NRD between 2011 and 2020 (under Resolution No 26/NQ-TW) aims to achieve national economic goals on “agriculture, farmers and rural areas”. Currently, the agriculture sector accounts for about 20% of GDP and 50% of jobs in Vietnam. Additionally, the sector plays a very important role in food security. Thus, the main NRD focus is to improve economic infrastructure and organization in the agricultural sector to help it to catch up with the industrial and service sectors.

Meanwhile, during the Park Chung Hee era, Korea’s economy shifted from import substitution to export-oriented industrialization and development of heavy industry. The Korean government initiated SU to narrow the wide income gap that stemmed from industrialization policies, and set it as the highest policy priority

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8 Resolution No. 26/NQ-TW dated August 5, 2008 of the 7th Congress, the Party Central Committee (Xth) about “agriculture, farmers and rural areas”.
aimed at improving income for villagers and achieving better life in rural areas. From 1973, Korea started to embark upon constructing SU factories to create a favorable working environment for workers. Moreover, SU factories not only contributed to export promotion, but also created the foundation for building industrial complexes in the agriculture sector (Chung, 2009).

2) Social direction

All people in communities involved in the two movements have equal chances to enjoy social benefits, such as health and education. Villagers should play a central role, but rural people have difficulty understanding NRD goals, and are not encouraged to participate in the movement. A large number of interviewees in our survey said they were unfamiliar with words such as “social infrastructure,” “modernized,” or “socialist orientation,” especially in the case of uneducated people. Moreover, they do not understand how the program would benefit their lives.

In contrast, the goals of SU were specific and easy to understand, using words such as “community,” “members,” and “we,” Rural people understood how the movement related to them personally, and they understood their roles and benefits from the movement. This helped them take part in the movement proactively. The SU movement was, in other words, socially inclusive.

3) Targets

The Vietnam Government identified 19 national criteria to assess a new rural commune (Table 1). NRD has two phases of targets: by 2015, about 20% of all communes should achieve all rural criteria, and by 2020, 50% of communes should achieve all criteria. However, these 19 wide-ranging criteria are difficult to follow, and some criteria do not reflect the current needs, desires, and situation of rural people. This wastes resources, and makes people reluctant to get involved in NRD. One controversial criteria, for instance, stipulates that each commune must have at least one marketplace, but each region has its own marketplace style. In the Red River Delta, people often go to marketplace on certain days of the lunar month; in mountainous areas, villagers buy and sell only on weekends; or in the Mekong Delta, people trade on floating markets. It is essential that NRD adjust its criteria to cover these geographic differences.
Table 1: The National Set of Criteria on New Rural Development

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<td>1</td>
<td>Planning and implementation of planning</td>
</tr>
<tr>
<td>II. ECONOMIC-SOCIAL INFRASTRUCTURE</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Communications information</td>
</tr>
<tr>
<td>3</td>
<td>Irrigation</td>
</tr>
<tr>
<td>4</td>
<td>Electricity</td>
</tr>
<tr>
<td>5</td>
<td>Schools</td>
</tr>
<tr>
<td>6</td>
<td>Cultural facilities and infrastructure</td>
</tr>
<tr>
<td>7</td>
<td>Rural markets</td>
</tr>
<tr>
<td>8</td>
<td>Post office</td>
</tr>
<tr>
<td>9</td>
<td>Residential houses</td>
</tr>
<tr>
<td>III. ECONOMICS ACTIVITIES AND PRODUCTION ORGANIZATION</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Income</td>
</tr>
<tr>
<td>11</td>
<td>Households poverty</td>
</tr>
<tr>
<td>12</td>
<td>Labor structure</td>
</tr>
<tr>
<td>13</td>
<td>Types of production organizations</td>
</tr>
<tr>
<td>IV. CULTURE-SOCIAL ISSUES-ENVIRONMENT</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Education</td>
</tr>
<tr>
<td>15</td>
<td>Healthcare</td>
</tr>
<tr>
<td>16</td>
<td>Cultural lives</td>
</tr>
<tr>
<td>17</td>
<td>Environment</td>
</tr>
<tr>
<td>V. POLITICAL SYSTEM</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Political-social organization system</td>
</tr>
<tr>
<td>19</td>
<td>Social security</td>
</tr>
</tbody>
</table>

Source: Decision No. 491/QD-TTg on approving the National Criteria for New Rural Development by the Prime Minister, dated April 16, 2009.

SU, meanwhile, had three stages: in the formation stage from 1971 to 1973, the government classified about 31% of villages as “basic,” 57% as “self-help,” and 12% as “self-reliant.” Village classification depended on ten criteria (Table 3) concentrating mainly on infrastructure, income, and cooperation. This was a helpful and transparent way to track and “score” progress and contribution by each village, creating competition among villages in Korea. In the self-help development stage from 1974 to 1976, about 54% of villages fell in the “self-help” category, while 45% had become “self-reliant.” In the independent stage from 1977 to 1981, nearly 100% of villages had become “self-sufficient.”
### Table 2: Criteria for Village Classification

<table>
<thead>
<tr>
<th>Project</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Self-help village</strong></td>
</tr>
<tr>
<td>1. Farm roads</td>
<td>Completion of village roads</td>
</tr>
<tr>
<td></td>
<td>Improvement of village roads</td>
</tr>
<tr>
<td>2. Housing environment</td>
<td>Roof renovation for 70% of village houses</td>
</tr>
<tr>
<td></td>
<td>Embankment of creeks</td>
</tr>
<tr>
<td>3. Farming base</td>
<td>Farmland irrigation: over 70%</td>
</tr>
<tr>
<td></td>
<td>Reclamation of streams in villages</td>
</tr>
<tr>
<td>4. Cooperative life</td>
<td>Must have one or more of the following: town hall, warehouse, workshop</td>
</tr>
<tr>
<td></td>
<td>Total assets in village fund must be over: KRW 500,000</td>
</tr>
<tr>
<td>5. Income project</td>
<td>Must have one or more community income creation project</td>
</tr>
<tr>
<td></td>
<td>Average annual income per household: over KRW 800,000</td>
</tr>
</tbody>
</table>


4) Basic implementing unit

In Vietnam, NRD execution follows the top-down administrative hierarchy country system (central government → province → district → commune). The commune is the lowest planning and budgeting unit under the provincial level and district level, as well as a basic unit of NRD. Each commune includes from five to ten villages and has about 6,700 people (GSO, 2014). A commune in Vietnam is similar to ‘myon,’ ‘up’ and a village is similar to ‘ri’ in Korea. Since residents in each commune do not share the same interests, implementation of NRD at the commune level makes it difficult to harmonise benefits and allocate resources effectively among these villages.

The SU implementation network was quite different (the central government → large cities, provinces → small cities, counties → up, myon → ri, village). The
Korean government chose the village as the key unit of community involvement. Rural villages were traditional units for familiarity, mutual help and cooperation. Thus, the government used this understanding of the roots of society to encourage each individual to participate in the development of their own community.

5) The implementing agency

In Vietnam, the Central Steering Committee directs the NRD. The head of the Committee is a standing Deputy Prime Minister, its standing deputy head is the Minister of MARD, and remaining members are ministers of concerned ministries. Moreover, MARD, the program’s standing body, assists the Central Steering Committee to inspect and supervise program implementation through other ministries and local agencies. However, MARD does not control the administrative network, and it does not have power to force local agencies to follow NRD requirements.

In Korea, the government created the Saemaul Central Promotion Council to maintain implementation along the hierarchy of the administration network. The head of the council was the Minister of Home Affairs, and members were the deputy ministers of 22 related departments. The Korean government chose the Ministry of Home Affairs instead of the Ministry of Agriculture to organize and implement SU, because it had more power to control local administrative systems (Looney, 2012). This facilitated the successful coordination of SU policies.

4. Achievements

1) General achievements

Up until June of 2015, about 860 communes in Vietnam achieved all 19 criteria, accounting for only 9.7% of the total communes, while 1,195 communes achieved from 15 to 18 criteria, nearly 13.4%. Exactly 6,844 communes, or 76.9%, achieved fewer than 14 criteria. Vietnam is not likely to reach its goal of having 20% and 50% of communes with full 19 criteria by 2015 and 2020, respectively.
Table 3: Implementation of National Criteria up to June 2015

<table>
<thead>
<tr>
<th>Number of criteria achieved</th>
<th>Number of communes</th>
<th>Percentage of communes to total communes (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>19</td>
<td>860</td>
</tr>
<tr>
<td>2</td>
<td>15-18</td>
<td>1,195</td>
</tr>
<tr>
<td>3</td>
<td>10-14</td>
<td>3,190</td>
</tr>
<tr>
<td>4</td>
<td>5-9</td>
<td>2,940</td>
</tr>
<tr>
<td>5</td>
<td>&lt;5</td>
<td>714</td>
</tr>
</tbody>
</table>

Source: Central Steering Committee of the National Target Program on New Rural Development. 2015. Report on “Implementation Results of the National Target Program on New Rural Development up to June 2015” Hanoi. (in Vietnamese)

SU made a significant shift from “basic” to “self-help” and then to “self-reliant” villages in the first stage. In 1972, about 18,515 underdeveloped (basic) villages accounted for 53% of total villages in Korea. However, in 1974, the number of basic villages dropped considerably to 6,165 villages, only 18%. During the same period, the number of self-help villages increased from 40% to 62% and self-reliant villages from 7% to 20%. This suggests that SU contributed to improving the living standards of rural people.

Table 4: Village Development Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Basic Village</th>
<th>Self-help village</th>
<th>Self-reliant Village</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>34,665 (100)</td>
<td>18,415 (53)</td>
<td>13,943 (40)</td>
<td>2,307 (7)</td>
</tr>
<tr>
<td>1973</td>
<td>34,665 (100)</td>
<td>10,656 (31)</td>
<td>19,769 (57)</td>
<td>4,246 (12)</td>
</tr>
<tr>
<td>1974</td>
<td>34,665 (100)</td>
<td>6,165 (18)</td>
<td>21,500 (62)</td>
<td>7,000 (20)</td>
</tr>
</tbody>
</table>


2) Improvement of infrastructure

Infrastructure development is the first priority of NRD. After four years, many communes have achieved targets on post office and electricity implementation. However, fewer communes have achieved targets on schools, transportation, and culture sites. To sum up, these results fall far short of goals to bring modern socio-economic infrastructure to Vietnam’s rural areas, especially underdeveloped social infrastructure.
Table 5: Achievements of Infrastructure Criteria

<table>
<thead>
<tr>
<th>Achievement</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post office</td>
<td>87.5%</td>
</tr>
<tr>
<td>Electricity</td>
<td>77.5%</td>
</tr>
<tr>
<td>Marketplace</td>
<td>49.9%</td>
</tr>
<tr>
<td>Irrigation</td>
<td>48.7%</td>
</tr>
<tr>
<td>School</td>
<td>31.9%</td>
</tr>
<tr>
<td>Transportation</td>
<td>25.1%</td>
</tr>
<tr>
<td>Culture site</td>
<td>21.7%</td>
</tr>
</tbody>
</table>

Source: Central Steering Committee of the National Target Program on New Rural Development. 2015. Report on Implementation Results of the National Target Program on New Rural Development up to June 2015. Hanoi. (in Vietnamese)

Improvement of infrastructure undeniably brings more opportunities for rural people and improves their lives. Our analysis of survey data identified key findings about the effects of infrastructure enhancement. About 82% of interviewees said that “improved transportation and irrigation systems positively impacted their lives”, while 69% of respondents agreed with the positive effect of having a marketplace. In addition, more than half of the respondents confirmed that “a better electricity grid and water supply system positively impacted their lives”. Interviewees also said they were willing to contribute to NRD when they could see real benefits for them, their family, and their commune.

![Figure 2: Positive Impact of Infrastructure (%)](source: Survey conducted by authors)
However, the development of rural infrastructure also brings some negative effects. In particular, 23% of respondents said that the school system does not meet their requirements in both quantity and quality. In addition, 24% of the comments implied that “the infrastructure of power grids does not guarantee technical standards”, leading to the degradation and insecurity of rural power grids. About 23% of respondents said, “the construction works polluted the environment, especially regarding air pollution.”

Figure 3: Negative Impact of Infrastructure Development (%)

![Bar chart showing negative impact of infrastructure development on education and environment with 23% for both categories](image)

Source: Survey results conducted by authors

In contrast, the remarkable and tangible achievements of SU infrastructure development are clear. In the first stage, people played an active role in enlarging roads and paths in rural areas. In 1972, villagers built 21,634 kilometers (km) of roads under SU, which reached 89% of the target. In 1973, SU broadened 10,862 km of village paths, surpassing the target by 10%. Furthermore, housing improvement projects achieved impressive results. From 1971 to 1973, people replaced about 899,000 thatched roofs with tin or slate covering. These infrastructure improvements supported villagers with more comfortable access and more opportunities to create a better environment, leading to meaningful increases in household income and the long-term improvement of villagers’ well-being.

3) Improvement of living standards

In Vietnam, GSO (2014) reported that rural monthly average income per capita increased about 1.9 times, and the poverty rate decreased from 17.4% to 10.8%
between 2010 and 2014. In 2014, the gap between urban and rural income was cut by nearly half. In addition, 44.5% of communes reached the government income criteria, and 36.4% of communes met the government poverty criteria (MARD, 2015). Some surveys also confirmed improvement of income in rural areas: 56 communes in Ho Chi Minh City enjoyed higher income thanks to the survey on NRD. In our survey, 69% of interviewees stated that NRD positively influenced their income because of more job opportunities, better transportation, and easier communication.

In SU, however, the impact on boosting rural outcome is larger compared to NRD. Income per farm household in Korea increased nearly three-fold by the end of SU’s Stage 1, even surpassing that of urban worker households in 1974. Urban-rural income disparity decreased, with the ratio of household income in rural areas to urban ones improving from 67.1% in 1970 to 104.7% in 1974. Moreover, the absolute rural poverty\(^9\) rate decreased from 27.9% in 1970 to 10.8% in 1978 (Park, 2009). Some research questioned how much SU was responsible for these improvements, arguing that heavy rice subsidies not directly linked to SU (Park and Han, 1999) should be given credit. Nonetheless, SU undeniably brought many opportunities to rural people through income-raising projects. In a survey by Brandt and Lee (1981) in Korea, about 80% of respondents in rural areas said their standard of living was better in 1976 than in 1971.

4) Involvement of community

As of June 2015, capital mobilization from community and government budgets (including central and local governments) for NRD account for 10% and 28.8% of total capital, respectively. Loans (credit) account for the largest part, about 57.2%, implying that the program does not mobilize enthusiastic rural participation, and depends heavily on external resources.

Additionally, our survey confirmed that many villagers did not give much attention to NRD. Our team had many deep and straightforward conversations with rural people and leaders. More than 80% of respondents reported that they did not want to contribute land because it is their most valuable asset, and the key means of making a living. In addition, 45% of interviewees were not ready to

\(^9\) Absolute poverty was defined as a monthly household income below KRW 17,000 per rural household.
contribute workdays. While 86% of respondents contributed money, they often said that this was because commune leaders forced villagers to do so. Notably, 95% of officials interviewed said that people did not contribute money for NRD. Nearly 86% of people did not have any information about their contribution, reflecting lack of transparency. As a result, people gradually lost confidence and motivation to contribute to the program.

Figure 4: Investment Contribution to NRD and SU (%)

Source: Central Steering Committee of the National Target Program on New Rural Development. 2015. Report on Implementation Results of the National Target Program on New Rural Development up to June 2015. Hanoi. (in Vietnamese)

In contrast, SU attracted the active and voluntary participation of villagers. During 1971-1974, participants per village increased by 14.3 times, from 216 participants per village to 3,082, while community funds invested grew from 66% of total investment to 78.3% (Ministry of Home Affairs, 1980). Average labor days contributed per household were 19 days in 1973, reflecting the availability of very important volunteer labor to construct village roads, fix drinking water systems, and other activities. In fact, the number of workdays could be underestimated because it did not include labor days needed for replacing thatched roofs with cement tiles (Park, 1998).
5. Key determinants affecting resource mobilization by self-help approach between NRD and SU

Implementing SU is more efficient than NRD, from the process of selecting general goals and targets to choosing the basic unit of implementation. The SU implementation process attracted proactive participation from rural people. People understood their role and benefits from SU. Other key factors also contributed significantly to the success of SU, compared to NRD.

1) The role of leadership

NRD regularly organizes national meetings to discuss program results, but most participants have been leaders in related ministries and provinces. NRD has paid less attention to the “voice” of rural people. In addition, by 2014 only 13% of rural districts had established NRD coordination offices and most communes lack specified officers in charge of NRD (Central Steering Committee, 2015). According to our survey, commune leaders did not frequently discuss NRD with people, reflected in the fact that 60% of respondents said they did not believe in commune leaders and were not proactively involved in NRD. This implies weakening NRD leadership.

President Park Chung Hee was a pioneer and supervised SU strictly. He spent 9% of his inaugural speech promoting SU and discussing development policies for this program. Every month, the President chaired Cabinet meetings to address and coordinate problems of SU. Moreover, he presided over the Monthly Economic Trends Report Meeting, in which ministers, policy makers and local leaders of SU in random villages participated to report two successful outcomes of the movement. The monthly meetings created opportunities to share information, experiences and challenges at the national level (Kim, 2013). The President and ministers also often visited villages without notice. During his term, the President visited approximately 3,000 villages countrywide, where he listened to the opinions of villagers, and enhanced peoples’ belief in their leaders. SU leaders, voted in by villagers as trusted people, also played an important role, and male leaders worked in equal relationships with female leaders. These leaders were independent from political and administrative systems in rural areas and did not receive any material support. They often organized meetings to discuss and make decisions regarding SU
projects, giving powerful recognition to the opinions of villagers (Eom, 2011; Kim, 2012).

2) Active role of rural people

a. Opinion contributor

NRD does not regulate cooperation between commune leaders and villagers. First and foremost, NRD should consider sharing opinions on aspects of the movement. Currently, many people do not know, do not discuss, and do not contribute opinions regarding NRD. According to our survey, while most commune officials said that rural people did contribute opinions to NRD, rural people did not agree. We present some highlighted findings below:

About 75% of respondents said that they have not expressed their opinions about master plan formulation, and 63% said they had not expressed opinions on planning implementation. Meanwhile, 100% of officials said that rural people had contributed their ideas.

Figure 5: Opinion Contribution to Master Plan (%)

![Figure 5: Opinion Contribution to Master Plan (%)](image)

Source: Survey conducted by authors

About 92% and 90% of rural residents said they had not discussed irrigation work and water suppliers with commune leaders, respectively. Identifying a large disparity, 85% of commune officials said in our survey that they had received ideas from villagers in these two areas.

In SU, government and villagers co-existed in an institutionalized relationship
(Kim, 2012). Village meetings were vibrant and active. At meetings, villagers raised their voices on projects and how to implement them in their village. Minutes of village assembly meetings recorded who spoke, when and what. Based on this input, village assemblies made every important decision on new projects and the management of village assets with the signatures of all participants (Rho, 2014; Han et al., 2013). The fact that village SU leaders were willing to listen made villagers feel accepted and valued. Importantly, village SU leaders organized many informal meetings, such as drinking, luncheon, or dinner meetings with rural residents (Han, 2012). According to a large Korea Rural Economic Institute survey, 67% of respondents said they took part in all village meetings, while 28% answered that they often attended (Boyer and Ahn, 1991).

Figure 6: Opinion Contribution to Irrigation Work and Water Suppliers (%)

![Figure 6: Opinion Contribution to Irrigation Work and Water Suppliers (%)](image)

Source: Survey conducted by authors

b. Supervisor

Each commune in Vietnam has a board that supervises the monitoring and evaluation of NRD community-based results. The boards include 9 members selected from the community, meaning that some villagers are responsible for the work. In our survey, about 95% of commune leaders responded that rural people were involved in monitoring and evaluating NRD, but only 43% of rural residents agreed. Many people said they had not received any information about monitoring activities.

Meanwhile, evaluation was the critical factor in the overall success of the SU
movement. This work included monitoring and evaluating government assistance; the level of villagers' contribution, input, output; and the timeframe of projects. SU leaders and village leaders presented the project statement of accounts to village assemblies to emphasize transparency and accountability (Han et al., 2013). Besides, local leaders often organized weekly or monthly meetings with villagers to report on progress and results of projects (Eom, 2011).

3) Competitive system

In Vietnam, NRD expects rural people to be full “owners” of the program, and to participate fully and actively. However, capital mobilization does not reflect this. According to Decision No.800/QD-TTg, direct community contribution accounts for only 10% of total capital for the program, funds from the state budget (central and local governments) make up 40%, and loans/credits and funds mobilized from enterprises make up the remainder of capital. Moreover, poor communes would prefer to receive financial assistance from the central budget, and the government did not promote competition among communes. Thus, many communities and villagers display a passive and dependent attitude on government support, and are less motivated by, and feel less responsible for, NRD. A survey in 11 key NRD communes conducted by Ngoc Luan Nguyen (2012) proved that dependent attitudes were the biggest factor preventing villager contribution. Our survey results show that people are more voluntary and motivated to contribute to the NRD when they believe that the program brings practical benefits for them, their family, and their commune. These benefits can come from economic activities that improve and sustain their income, or can come in the form of access to healthcare, education, and other infrastructure-based services, like schools, supermarkets, and sanitation. More than 50% of people said they would be more willing to contribute to NRD if they can access better and faster healthcare and education. Nearly 40% of them said that they contribute because they expect the program to create jobs and increase their income and living standards.
Table 6: Factors that Affect People in Contributing to their Village (1: least impact; 5: strongest impact) (Unit: %)

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bring benefits to family:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Job creation</td>
<td>13</td>
<td></td>
<td>38</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>- Income increase</td>
<td></td>
<td></td>
<td>33</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>- Better and faster access to healthcare service</td>
<td>25</td>
<td></td>
<td>58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Better and faster access to education service</td>
<td></td>
<td>33</td>
<td></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Confidence in leaders of commune/village</td>
<td></td>
<td>20</td>
<td></td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Clear instruction of leader</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Warm concern of leaders of commune/village</td>
<td></td>
<td></td>
<td>30</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>The impact of association</td>
<td></td>
<td></td>
<td>11</td>
<td></td>
<td>44</td>
</tr>
<tr>
<td>Material encouragement</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Spiritual encouragement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
</tr>
</tbody>
</table>

Source: Authors

Meanwhile, the Korean government's SU system made use of the villagers’ competitive spirit for monetary and economic gains, and social recognition. Villages with better results were first to receive support. This avoided equal support and made villages compete (Goh, 2010; Kim, 2013). As one example, in the initial stage of SU, the government provided 355 packs of cement to all villages with the only requirement being that they must use the cement to benefit the entire village. In the next stage, the government classified rural villages into three categories on the basis of community mobilization achievements: 1) basic, 2) self-help, and 3) self-reliant village. This classification helped create fair competition among villages for government support. In the cement example above, for instance, the government selected 16,000 successful villages (half of the total) to grant additional support of 500 sacks of cement and a ton of iron bars. Higher performers received more support, and non-performers received no further support. By the end of the movement, 100% of villages became self-reliant, an increase from only 12% of total villages in 1971.
Table 7: Government Support for Villages during the Period of 1971-1978

<table>
<thead>
<tr>
<th>Projects &amp; support plan</th>
<th>Basic village</th>
<th>Self-help village</th>
<th>Self-reliant village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic support</td>
<td>- Saemaul Cultivation (cement/iron bars)</td>
<td>- Saemaul Cultivation (cement/iron bars)</td>
<td>- National territory beautification</td>
</tr>
<tr>
<td></td>
<td>- Farm road + rooftop</td>
<td>- Farm road + rooftop</td>
<td>- Maintenance of small river</td>
</tr>
<tr>
<td>Additional support</td>
<td>- National territory beautification</td>
<td>- Support fund for each village more than KRW 500 thousand</td>
<td>- Support fund for each village more than KRW 1 million</td>
</tr>
<tr>
<td></td>
<td>- Maintenance of small river</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Support fund for each village more than KRW 500 thousand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preferential support</td>
<td>- Infrastructure construction</td>
<td>- Culture/welfare</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Income increase</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Cooperative farming</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


4) Transparency

Officials do not often disseminate information about NRD community contributions. It is difficult to find formal statistics on how many people participate in the program, and how much land, labor, and money they contribute. Authorities do not publish statistics on village contributions. Our survey showed that about 82% of respondents said they had not seen announcements related to their contributions. The lack of transparency opens opportunities for leakage and corruption of the type documented in Quang Minh, Quang Thang, Quang Long, Quang Thanh (Quang Ninh province) communes (Thanh Duy, 2014). This hampers community belief and constrains NRD development.

Meanwhile, it is easy to access information about rural participation in SU. One government criterion tallied total village funds contributed, which played an important role in making it easy to check results and encourage a “self-help” spirit. Transparency was an important factor in shaping good SU governance (Eom, 2011).

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5) Promotion

In Vietnam, although authorities promoted NRD in diverse ways—from mass media to commune-level bulletin boards—these methods are rigid and ineffective. When our research team interviewed people in different social strata, especially the poor and uneducated, most reported that they had never heard of NRD. Even when people know about it, they do not understand the nature of the program. However, when we asked whether they contributed money, construction materials, or workdays for infrastructure construction at their village, most answered “yes.” This means that promotion has not drawn rural people’s attention to NRD. Consequently, a number of people think that rural development is only about infrastructure. According to rural people, the most effective way of promotion is direct talk and discussions between leaders and villagers.

In SU’s publicity campaign, in contrast, the Korean government established the Saemaul Broadcasting Center in 1972. By the next year, Korea had two other broadcasting companies promoting the SU movement. From 1971 to 1980, people watched 66 public films about SU (Kim, 2012). Everyday at 5:45 AM, when villagers woke, they would hear the broadcast of the energetic “Song of Saemaul”. All public buildings hung a three-leafed SU flag representing the three values of SU spirit: diligence, self-help, and cooperation. The publicity campaign succeeded in delivering information to villagers, and encouraged them to participate in SU.

V. CONCLUSION

Vietnam’s NRD has improved the living standards of people in rural areas. However, external assistance is not stable, and NRD is not likely to achieve prosperity and modernization for Vietnam’s rural communities. Therefore, NRD must apply a self-help approach for rural people to contribute more proactively to NRD.

Inspired by the successful Korean SU self-help model, we compared SU to NRD in their respective initial stages: NRD from 2011 to 2014 and SU from 1971 to 1974. We also surveyed people in North and South Vietnam to understand NRD issues and to identify practical policy options for the ongoing implementation of NRD.

Vietnam’s NRD and Korea’s SU both specify rural people as the owner of
these respective programs. However, NRD has not achieved the significant success of SU. The wide-ranging goals and targets of NRD—from economic to social and political issues—confuse rural people, who do not understand the program and its goals. In contrast, rural people understood SU’s direct goal of income increase to achieve a better life with the specific “diligence, self-help and cooperation” motto.

After the first stage of implementation, Vietnam’s government classified 860 communes as new rural communes, below 50% of the target. At the same stage, SU had more than 7,000 developed villages, above 50% of the target. Moreover, villagers contribute about 10% of total investment in NRD, compared with the 78% from Korean villagers in SU. This is clear evidence of how community involvement was much more vibrant in SU, compared to NRD.

We can draw some useful lessons for NRD in terms of villager resource mobilization:

- NRD requires strong political will from top-level leaders, as well as effective grassroots leadership. Leaders at all levels must organize and direct villagers to perform successful rural development. Leaders who display self-discipline, patience, and strong faith can encourage villagers’ trust in the program. For human resources, authorities should administer an entry exam to identify outstanding leaders who can have an influence on other leaders and people.
- The Vietnamese Government should revamp the administrative system to place villages as a key administrative unit rather than the commune.
- NRD should also revise and set clear goals and targets to help rural people. This would help rural people understand and consider NRD as a movement for themselves.
- It is also necessary to invest capital efficiently to meet peoples’ demand and priorities. Villagers should know and discuss details related to each project in their village, and people expect to know how officials are using villager contributions.
- Villagers must participate actively, and leaders must solicit their opinions. Local leaders should organize frequent meetings to discuss project progress and results. These will encourage proactive villager involvement in NRD, and increase their belief in the movement.
- Government should establish a system that promotes competition between communes/villages, motivates independence from government support, and increases villager sense of responsibility for NRD success. Government actions
should comply with the principle of “supporting the commune with better performance result first”. The government can classify villages into four categories, such as “good”, “medium”, “weak”, and “poor”. Based on this performance classification, the government can allocate support and budget for each commune.

- In order to support the government’s fight against corruption, it is essential for people to receive detailed information regarding the use of villager financial contributions and enhanced transparency. Therefore, government should ensure disclosure of, and access to, NRD information, especially related to villagers’ economic contribution. The NRD website, national and local media (newspapers, radio broadcasting system, etc.), or bulletin boards of each village can display public information.

- Finally, simplified and improved promotion can attract rural peoples’ involvement, including from the poorest, most uneducated Vietnamese. Vietnam should replace complicated and abstract terms (for example, “social infrastructure”, “modernized”, “socialist orientation”, and “master plan”) with language that people can understand and remember. Promotion requires commune leaders’ expertise and patience.
Appendix 1: Basic Nature of the Survey

A. DESIGN OF QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Type</th>
<th>Unit</th>
<th>Total</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Type of objects</td>
<td></td>
<td>2</td>
<td>- Commune people</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Leaders</td>
</tr>
<tr>
<td>2 Type of questionnaire</td>
<td></td>
<td>2</td>
<td>- Commune people</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Leaders</td>
</tr>
<tr>
<td>3 Number of respondents</td>
<td>People</td>
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<td></td>
</tr>
<tr>
<td>- Commune people</td>
<td>People</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>- Leaders</td>
<td>People</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>4 Number of question</td>
<td>Question</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>- Commune people</td>
<td>Question</td>
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<td></td>
<td></td>
<td></td>
<td>(2) opinion contribution: 4</td>
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<td></td>
<td></td>
<td></td>
<td>(3) contribution by money and land: 9</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(4) monitor of NRD implementation: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(5) evaluation of NRD implementation: 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(6) policy implications: 8</td>
</tr>
<tr>
<td>- Leaders</td>
<td>Question</td>
<td>30</td>
<td>(1) information of respondent: 6</td>
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<td></td>
<td></td>
<td></td>
<td>(2) activities of propaganda and training: 5</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>(3) resource mobilization for NRD: 10</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(4) monitor of NRD implementation: 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(5) policy recommendations: 6</td>
</tr>
<tr>
<td>5 Coverage of survey</td>
<td>Commune</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>- The South</td>
<td>Commune</td>
<td>5</td>
<td>Long Hoa, Ham Ninh, Cua Can, Thanh An and Condao</td>
</tr>
<tr>
<td>- The North</td>
<td>Commune</td>
<td>5</td>
<td>Phu Dien, Xuan Dinh, Thanh Tri, Bat Trang and Xuan Duong</td>
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<tr>
<td>6 Time of survey</td>
<td>Month</td>
<td>3</td>
<td>From October to December 2013</td>
</tr>
</tbody>
</table>

B. SURVEY RESULTS

| 7 Gender                       | %       |       |                                                                      |
| - Male                         | %       | 46    |                                                                      |
| - Female                       | %       | 54    |                                                                      |
| 8 Average age                  | Year    | 42    |                                                                      |
| 9 Average income               | VND 1 mil. | 24   | Farmers, people working in social associations, teachers, businesspersons, officers, freelancers and housewives. |

Source: Authors
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   1. The Model
      1) Research
   2. The Empirical Results
II. Implications
   1. The Model

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