Journal of Global Business and Trade

Vol.7 No.1 May 2011

IAGBT
The Journal of Global Business and Trade

International Academy for Global Business & Trade

Journal of Global Business & Trade
Vol.7 No.1 May 2011
IAGBT

ISSN : 1946-5130

Journal of Global Business and Trade

Vol.7 No.1 May 2011

Published by
International Academy for Global Business & Trade

IAGBT
The Journal of Global Business and Trade
www.iagbt.org

The Journal of Global Business and Trade

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The Function and Ownership of Bills of Lading as the Contract of Carriage

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ARTICLE INFO

Keywords:
This
Bill of Laing,
Shipper, Carrier,
Contract of carriage.
Carriage of Goods
by Sea.

ABSTRACT

This article primarily concerns the bill of lading's legal functions and the passage of ownership in the bill of lading. It describes and analyzes the functions of the bill of lading and ownership which may be helpful for international traders and researchers. Also, it attempts to analyze the negotiable nature of the bill of lading in relation to its contractual roles in English and Korean law to observe their interrelationship and any influences on each other. The vital functions of the bill of lading can be summarized as the receipt for goods shipped, including receipt as to quantity and receipt as to condition, the evidence of the contract of carriage, a document of title and etc. The bill of lading should be treated as the contract of the carriage itself even between the carrier and the shipper.

I. Introduction

A contract of carriage is normally evidenced by a bill of lading when the goods to be shipped are only part of the cargo which a ship is to carry. This situation will arise when a ship owner, or other person authorized to act on his behalf, employs his vessel as a general ship by advertising that he is willing to accept the cargo from all comers for a particular voyage. Once cargo has been accepted and shipped by such a carrier, a bill of lading will be issued on his behalf acknowledging that the goods have been received for carriage or shipped as the case may be.

The bill of lading is a document issued by a ship owner or his representative once goods have been placed on board a vessel. It is an extremely important legal document both in the law of carriage of goods by sea and in maritime practice. A practical concern regarding the enforcement of a bill of lading is the identification of the contractual carrier. Where the carrying vessel is not under a charter, the ship owner will invariably be liable as the carrier for the loss of or damage to the cargo.

The bill of lading originated around the fourteenth century as a non-negotiable receipt issued by a ship owner, for cargo received, to a merchant who did not intend to travel with his goods. By the eighteenth

century, the bill of lading had acquired its defining characteristic; that of being negotiable by endorsement in order to meet the needs of those merchants who wished to dispose of their goods before the vessel reached its destination.

The United Kingdom and a number of other Western European governments decided to adopt the Hague/Visby approach and consequently implemented legislation to give effect to the Convention. In the case of the United Kingdom, this took the form of the Carriage of Goods by Sea Act of 1971 which did not, however, become effective until June 1977. While 30 states have so far formally adopted the Hague/Visby Rules, their provisions have been incorporated into the maritime codes of several other states where they tend to be applied in international trade on a reciprocal basis.

The bill of lading is normally issued in the ship owner's or the time charterer's form with the name of the carrier on the front side. The carrier's name on the bill of lading can be significant when seeking to identify the carrier because the third party holder of the bill of lading has no conclusive information on the carrier. Therefore, Article 15(1) of the Hamburg Rules and Article 23(a)(i) of the Uniform Customs and Practice for Documentary Credit, 2007 Revision(ICC No.600) provide that the bill of lading must include the name of the carrier on its face.

This article attempts to examine some basis characteristics of bill of lading and also to examine the negotiable nature of the bill of lading in relation to its contractual role in English law in order to observe the interrelationship and any influence they may have on each other.

II. Functions of a Bill of Lading

2-1. Receipt for Goods Shipped

Originally the bill of lading started life as a mere bailment receipt which was required to obtain delivery of the goods at the port of discharge. Even when used in this capacity it would normally include statements as to the quantity and description of the goods shipped together with the condition in which they were received by the carrier. It is vitally important for the shipper or consignee that the carrier should be required to make accurate and unambiguous statements as to the quantity and condition of the goods shipped. In the absence of such statements in the bill, a consignee seeking to recover for goods short delivered or damaged on discharge would have the burden of proving the quantity or condition of the goods when shipped. While it is true that such details are normally entered onto the bill by the shipper himself, the natural reaction of the carrier's agent would be to protect his principal by inserting a clause to the effect that weight, quantity and conditions unknown or shipper's count before adding his signature to the bill.[1]

After receiving the goods into his charge, the carrier, master or agent of the carrier shall, on demand of the shipper, issue to the shipper a bill of lading showing among other things;

(a) The leading marks necessary for identification of the goods as the same are furnished in writing by the shipper before the loading of such good starts provided such marks are stamped or otherwise shown clearly upon the goods if uncovered, or on the cases or covering in which such goods are contained, in such a manner as should ordinarily remain legible until the end of the voyage.

(b) Either the number of packages or pieces, or the quantity or weight as the case may be as furnished in writing by the shipper.

(c) The apparent order and condition of the goods.

The Hague/Visby Rules further provide that such statements in a bill of lading shall be prima facie evidence of the receipt by the carrier of the goods as so

[1] Indeed, printed clauses to this effect appear in many of the standard forms such as the Conlinebill and the Congenbill. Such a qualification greatly reduces the evidentiary value of the statement so far as the shipper is concerned. See Atlas [1996]1 Lloyd's Rep 642.

described but conclusive evidence against him once the bill has been transferred to a third party acting in good faith. The common law had earlier reached much the same position with regard to the evidentiary value of statements in a bill of lading, although it is noticeable that, in the case of third parties, the Hague/Visby formulation dispenses with the need for action in reliance which was an essential requirement for triggering the estoppels mechanism at common law.[2]

In the hands of the shipper, the bill of lading is prima facie evidence at common law of the weight or quantity of goods shipped. To avoid liability, the carrier has the burden of proving that the goods were not shipped as stated in the bill. In *Smith v Bedouin Steam Navigation Co,* a case in which 988 bales of jute had been delivered under a bill which stated that 1,000 bales had been shipped, Lord Shand indicated that for the carrier to succeed, 'the evidence must be sufficient to lead to the inference not merely that the goods may possibly not have been shipped, but that in point of fact they were not shipped.[3]

The practical effects of the common law anomaly were largely circumvented by Article III Rule 4 of the Hague/Visby Rules[4], which provides that statements as to quantity in a bill of lading are conclusive evidence in favor of a consignee or endorsee who takes the bill in good faith. Not the bill however, are governed by the Rules[5] and in those situations to which they did not apply, the anomaly persisted until the legislature finally intervened in the form of the Carriage of Goods by Sea Act of 1992. This statute came into force in September 1992 and from that time representations in a bill of lading as to the quantity of goods shipped or received for shipment are conclusive evidence against the carrier in favor of a lawful holder of the bill, i.e. a transferee in good faith.

Article III Rule 3 of the Rules provides that the shipper can demand that the carrier issue a bill of lading showing either the number of packages or pieces or the quantity or weight as the case may be as furnished in writing by the shipper. The carrier is under no obligation to issue a bill or presumably to acknowledge the quantity of cargo shipped unless requested by the shipper.[6] So far as the evidentiary value of the bill of lading is concerned, the Hague/Visby Rules follow the common law regarding the bill in the hands of the shipper as prima facie evidence of the amount of cargo shipped.

2-2. Evidence of the Contract of Carriage

On the reverse side of every standard liner bill of lading form is to be found a detailed set of printed contractual terms or a reference to the long form bill in which they are set out in full. The accepted view is that at least so far as the shipper is concerned, these terms do not constitute the contract of carriage itself, but merely provide evidence of it. The contract is normally concluded orally long before the bill is issued and the terms are inferred from the carrier's sailing announcements and from any negotiations with loading brokers before the goods are shipped. Consequently, should the goods be lost or damaged before a bill of lading is issued, the shipper will not be deprived of a remedy for breach of contract[7].

If the printed terms of the bill of lading which is subsequently issued do not comply with those of the earlier oral agreement, the shipper is not debarred from submitting oral evidence to establish the precise terms of that agreement. This view was expressed as early as 1879 by Lush J in the following terms; 'A bill of lading is not the contract but only the evidence of the contract and it does not follow that a person who accepts the bill of lading which the ship owner hands him necessarily and without regard to circumstances binds himself to abide by all its stipulations. If a shipper is not aware

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[2] See Compania Naviera Vascongada v Churchill [1906]1 KB 237 at p.249..

[3] See Att Gen of Ceylon v Scindia Steam Navigation Co[1962] AC 60.

[4] See Rasnoimport v Gutbrie Co[1966], p.123.

[5] See infra p.174.

[6] The burden of proving such a request rests with the shipper. See *the Atlas*[1996] 1 Lloyd's Rep 642;. *The Mata K*[1998]2 Lloyd's Rep 614.

[7] Pyrene v Scindia Navigation *Co*[1954] 2 QB 402.

when he ships them or is not informed in the course of the shipment that the bill of lading which will be tendered to him will contain such a clause, he has a right to suppose that his goods are received on the usual terms and to require a bill of lading which shall express those terms.[8].

There can be no doubt that once endorsed for value to a bona fide third party, the bill of lading becomes conclusive evidence of the terms of the contract of carriage. *In Leduc v Ward*[9]. the endorsees of a bill of lading sought to recover damages for a consignment of rape seed, shipped from Fiume to Dunkirk which had been lost off the mouth of the Clyde. They argued that as the vessel had made an unjustifiable deviation to Glasgow, the ship owners could not rely on the perils of the sea exception in the bill. The ship owners on their part contended that the deviation was not unjustified since the shippers were aware at the time of shipment that the vessel intended to call at Glasgow. In rejecting this argument, the Court of Appeal held that, in the circumstances, the bill provided conclusive evidence of the terms of the contract. The decision was in essence based on an interpretation of S1 of the Bills of Lading Act of 1855[10] which provides that the endorsee of a bill shall have transferred to and vested in him all rights of suit and be subject to the same liability in respect of such goods as if the contract contained in the bill of lading had been made with himself[11]. Fry LJ preferred to rest his judgment on the view that the provision of the statute marking the contract contained in the bill of lading assignable is inconsistent with the idea that anything which took place between the shipper and the ship owner and not embodied in the bill of lading could affect the contract.[12]

2-3. A Document of Title

Negotiable bills of lading originated in sea transport because the voyages were normally lengthy and invariable slow. The owners of cargo therefore required a document of title in order to raise credit for an international sale or to take advantage of an opportunity to sell the goods in transit. A bill of lading will only operate as a document of title, however, if it is drafted as an order bill, i.e. a bill under which the carrier agrees to deliver the goods as their destination to a named consignee or to his order or assigns. If the document only makes provisions for delivery to a named consignee, it is known as a straight bill of lading or waybill, and lacks the negotiable quality required to qualify it as a document of title.[13]

The development of the bill as a document of title has been so successful that, over the years, it has come to exercise a tripartite function in relation to the contract of carriage, to the sale of goods in transit and to the raising of a financial credit. There is a general feeling that this multiplicity of roles is not always compatible and that the present form of the bill of lading is somewhat of an anachronism. The feeling is particularly strong among ship owners who believe that the three roles should be separated in order to prevent the carrier being burdened by the incidents of transactions which are none of his own.

2-4. Function in Contract of Sale

Endorsement and delivery of the bill of lading will normally transfer ownership of the goods covered by it to the endorsee provided that four requirements are met. First, the bill must be transferable on its face. That is, it must be an order bill expressly deliverable to the order or assigns of the shipper or consignee. This is not the case where the bill makes the goods deliverable only to a specified person or where the bill is operated to be non-negotiable. Second, the goods must be in transit at

[8] Crooks v Allan(1879) 5 QBD 38 at p 40. See also Lord Bramwell in *Sewekk v Burdick* (1884) 10 ApCas 74 at p 105.p

[9] (1888) 20 QBD 475.

[10] Now repealed. See A6 of the Carriage of Goods by Sea Act 1992.

[11] With this respect to this particular point, s 3(3) of the Carriage of Goods by Sea Act 1992, replacing S1 of the Bills of Lading Act 1855, is drafted in more general terms.

[12] Leduc v Ward at p484.

[13] See The Cbitral [2000] 1 Lloyd's Rep 529.

the time of the endorsement. This does not mean that the cargo need be at sea, but it must be in the possession of a forwarding agent or carrier for the purpose of carriage and not yet be handed over to the party entitled to delivery at the destination port. Third, the bill must be initiated by a person with good title and the endorsement must be accompanied by an intention to transfer the ownership of the goods covered by it.

A considerable proportion of international trade is financed by banks through a system of documentary credits. Under this system the prospective buyer requests his bank to open a credit in favor of the seller. In order to draw on this credit the seller is required to ship the contract goods and then submit appropriate documents in the required form to the bank. The precise obligations of the parties will depend on the terms of the individual credit, but standard formats for such arrangement are recommended by the international chamber of commerce under the title of Uniform Customs and Practice for Documentary Credits.

It must be remembered that the prime function of a bill of lading as a document of title is in relation to the contract of carriage and that the two functions already outlined are merely parasitic at least so far as the carrier is concerned. While endorsement and delivery of a bill of lading will normally transfer ownership of the goods covered by it, such endorsement has always been ineffective at common law in transferring to the endorsee the rights and obligations arising under the contract of carriage.

While most of the problems associated with title to sue have been resolved by the Carriage of Goods by Sea Act of 1992, the well-established common law device of the implied contract remains available should the remedies provided by the Act prove deficient or inappropriate in any particular case.

The Carriage of Goods by Sea Act of 1992, drafted by the Law of Commission, came into force on September 16, 1992 and governs all contracts of carriage concluded on or after that date. [14] Unlike its predecessor, the Bills of Lading Act of 1855 which applied only to bills of lading, the provisions of lading, it is immaterial whether the document is a shipped or received for shipment bill.[15]

III. Evidentiary Nature of the Bill of Lading

3-1. Between the Carrier and the Shipper

It has been generally recognized in English law that the bill of lading is treated as not only being the evidence of the contract of carriage but as being the contract itself. This evolved character is given due recognition and effect under the Carriage of Goods by Sea Act of 1992 which defines the contract of carriage in Section 5(1) as the contract contained in or evidenced by the bill of lading.[16] This binominal character of the bill of lading is dependent upon with whom the carrier has a relationship: the shipper or the endorse. Therefore, the bill of lading, at least between the carrier and the original shipper, amounts only to mere evidence of the contract of carriage. In Ardennes SS (Cargo Owners) v. SS Ardennes (Owners)[17], oranges were shipped from a Spanish port on the understanding that the ship would sail directly to London, but the ship called at Antwerp and the consequent in arrival at London caused loss to the cargo owner. In his claim against the carrier for such a delay, the carrier relied upon a term contained in the bill of lading which would have permitted the ship to call at Antwerp. It was held that the bill of lading was only evidence of the contract of carriage and any oral

[14] The Act repealed its predecessor, the Bills of Lading Act 1855.

[15] This provision disposes of the questionable argument that received for shipment bills do not constitute documents of title and so fall outside the ambit of the Bills of Lading Act 1855. See Debattista, C, Sale Section 1(5).

[16] F.Reynolds, "The Carriage of Goods by Sea Act 1992", (1993) LMCLQ 436 at 441.

[17] [1951] 1 KB 55.

evidence was admissible to establish the original terms of the contract.[18]

The evidentiary nature of the bill of lading as between the carrier and the shipper is questioned by a contrary view that the bill of lading should be the contract of carriage itself. [19] The evidentiary function of bill of lading goes against the real expressions of shippers and carriers who often look to the bill of lading for the terms of the contract of carriage which that document covers, despite the fact that the bill may be issued several days after the conclusion of the contract. It is contended that there is some doubt on the authority of the decision in Ardennes SS (Cargo Owners) v. SS Ardennes (Owners) [20] which distinguishes Leduc v. Ward that on the grounds that it was a case between the ship owners and endorsee of the bill of lading between whom its terms are conclusive by virtue of the Bills of Lading Acts of 1885 so that no evidence was admissible in that case to contradict or vary its terms. When one reexamines Leduc v. Ward, it can be found that the members of the Court of Appeal deciding Leduc's case did not intend any such restriction upon their view that the bill of lading is the contract of carriage itself. The leading judgment delivered by Lord Esher MR in Leduc v. Ward rather admits to only two situations whether the contract of carriage cannot be contained in the bill of lading

3-2. Between the Carrier and the Endorsee

In contrast with the bill of lading's nature conceived in the relationship between the carrier and the original shipper, the position in English law is clearly different from that between the carrier and the endorsee. The bill of lading is the contract itself in the sense that it contains the contractual terms between those parties. Therefore, in Leduc v. Ward, the endorsee of a bill of lading sued the carrier for loss to cargo as a result of division. The carrier contended that there was no deviation because the route taken on the voyage had been expressly and orally agreed to by the shipper in a stipulation not recorded on the bill. It was held that anything that took place between the carrier and the shipper, not embodied in the bill of lading, could not affect the endorsee. The carrier deviated his way out of the exclusion clauses in the bill of lading. [21]

If a bill of lading, issued under a charter party, is indorsed to a bona fide purchaser for value, the bill of lading will become the conclusive evidence of the contract of carriage so far as the endorsee is concerned. [22]

IV. The Ownership in the Bill of Lading

4-1. Passage of Ownership

One of the most striking features of the rules of English law as to the passage of ownership is that, contrary to the natural expectation, property is not necessarily linked either to delivery or possession. The basic rule as to the passage of ownership in English law is that property is to pass when the parties intend it to pass.[23] The rule is generally called as the principle of

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[18] This view is reaffirmed by the recent judgement from the Court of Appeal *to Cho Yang Shipping Co., Ltd. V Coral(UK) Ltd*.[1977] 2 Lloyd's Rep 641.

[19] C. Debattista, "The Bill of Lading as the contract of carriage-A Reassessment of Leduc v. Ward",(1982) 45 MLR 652: W. Poor, Poor on Charterparties and Ocean Bills of Lading, 5th ed,(1968), at 134.

[20] C. Debattista, *op, cit*, 657. .

[21] For further examples of the same principle see The Royal Exchange Shipping Co. Ltd. V. WJ Dixon & Co.,(1886) 12 App Cas 11, where the endorsee was not affected by the shipper's agreement with the carrier that goods could be stowed on deck: *The El Amria and the EL Minia* [1982] 2 Lloyd's Rep 28, where a contract between the shipper and the carrier containing a jurisdiction clause different to that stipulated in the bill of lading was held not to avail the bill of lading holders.

[22] *Trade Star Line Corp v. Misui & Co. Ltd(The Arctic Trader)* [1996] 2 Lloyd's rep.449 at 455. The same is true between the carrier and a person to whom the bill of lading has been transferred, not as an endorsee, but as consignee. *Compania Commercial Naviera San Martin S.A. v. China National Foreign Trade Transportation Corp.(The Costanza)* [1981] 2 Llyd's Rep. 148 at 150.

[23] Sale of Goods Act(SGA) s. 17(1).

consent. Given that the intention of the parties is absent, one of the most important presumptive rules to ascertain the intention of the parties provides that the property passes at the time of contract.[24]

As regards the effects of the passage of ownership as against the third persons, one needs to briefly examine the rules as to seriatim dispositions by the seller in possession of sold goods and by the non-possessing buyer as well as the effects of the passage of ownership in the event of the seller's or the buyer's insolvency.[25] The basic rule as to the passage of ownership under English law is that where there is a contract for the sale of specific or ascertained goods the property in them is transferred at such time as the parties intend it to pass.[26] The court will look at the terms of the contract, the conduct of the parties and other circumstances of the case in determining when the parties intend property to pass.[27] However, it has been proven that the court often faces difficulty in order to figure out the parties' intention. The SGA provides five rules of presumed intention which may be used to ascertain the intention of the parties about the passage of property unless a different intention appears.[28] Although the SGA does not define 'unascertained goods', it is described as those identified in accordance with the agreement after the time a contract of sale is made.

The basic rule under Korean law as to the transfer of property is that property does not pass at the moment the parties consent to the transfer of property, but passes when two basic requirements are satisfied: the mutual consent between the parties that property shall pass from the seller to the buyer and the delivery of goods to the buyer. This delivery is deemed to constitute a separate real agreement by which property is transferred to the buyer.[29] There is a major debate whether the principle of abstraction is employed in Korean law because of the lack of a specific provision under the KCC for this matter. The majority view insists the principle of abstraction governs all the real agreements. Therefore, the transfer of property remains valid and the transferred property to the buyer is unimpaired even if such a contract never existed due to the absence of agreement between the parties or if it was rescinded later by one of the parties because of such as mistake.

4-2. Passage of Ownership and Bills of Lading

The bill of lading in international sale of goods plays a key role in English law to transfer the property or the goods if the transfer was made with that intention. Where the bill of lading is made out to the order of the seller or his agent, it is presumed that the seller intends to reserve the right of disposal and consequently the property does not apply to FOB contracts on the basis that a FOB seller who in this way seeks to reserve the right of disposal acts contrary to the contract and not in performance of his contract to place them free on board.[30] However, this view has not been adopted in any subsequent case and it is argued that a FOB seller may perform his duty to deliver by shipping the goods without at the same time unconditionally appropriating them to the contract so as to pass property.

Where the bill of lading is made out to the order of the buyer, it is generally presumed that property pass on shipment.[31] A bill of lading under Korean law traditionally embodies two legal effects: proprietary and contractual effect. The former means that although transfer of the bill of lading does not itself render passage of the property of the goods, it is closely connected with that in that its transfer to a person who is entitled thereby to receive the goods may have the same effect as delivery of the goods themselves in

[24] Sale of Goods Act(SGA) s. 18 rule 1.

[25] U. Drobnig, "Transfer of Property", in: A. Hartkamp et al. ed., Towards a European Civil Code, 3rd ed., Nijmegen: Kluwer Law International(2004), at 729 et seq.

[26] Sale of Goods Act(SGA) s. 17(1).

[27] Sale of Goods Act(SGA) s. 17(2).

[28] Sale of Goods Act(SGA) s. 18 .

[29] Lee, Eun-young, *Civil Law[General Principles of Civil Law, Property Law],* 5th ed., Seoul; Pak Young Sa, (2007), at 348 et seq.

[30] Browne v. Hare (1859) 4 H. & N. 822 at 830.

[31] Sale of Goods Act(SGA) s. 18 rule 5(2).

respect of property, pledge and etc.[32] Once a bill of lading has been issued, disposition of the goods shall be affected only by surrender of the bill of lading. There may be some cases in which the proprietary effect where a third party obtains a bill of lading in good faith is in conflict with the proprietary effect where another third party obtains the actual goods in good faith.

V. Conclusions

The bill of lading originated around the fourteenth century as a non-negotiable receipt issued by a ship owner, for cargo received, to a merchant who did not intend to travel with his goods. It would contain statements as to the type and quantity of goods shipped and the condition in which they were received.

An individual wishing to ship a consignment of goods overseas approaches a shipping line, either directly or more often through a forwarding agent with a view to reserving space on a vessel. From that point the carrier normally has control of the goods and is ultimately responsible for loading abroad. In the meantime the shipper will normally acquire a copy of the carrier's bill of lading form which is obtainable either direct from the carrier's agents or from stationers throughout the country.

A bill of lading is a document issued by carrier acknowledging that specified goods have been received on board as cargo for conveyance to a named place for delivery to the consignee who is usually identified. There are several legal functions of the bill of lading. First, it is an evidence of receipt of cargo. Bills of lading originated as no more than documents issued to merchants by carriers to evidence receipt by the carriers in good condition of cargoes shipped on board their vessels. The words 'shipped on board in apparent good order and condition' remain the most common form of words used to evidence receipt on board a vessel in good condition of a shipper's cargo. Second, it is an evidence of a contract of carriage. The manner in which bills of lading are issued has dictated their characterization, generally, as documents that contain or evidence rather than constitute contracts of carriage. Third, it is a document of time to cargo. By mercantile custom, both revived for shipment and shipped on board, bills of lading have come to be treated as documents of title to cargo.

It has shown that while the transfer of a bill of lading for value in English law is merely prima facie evidence of intention for the transfer of property, the transfer of the bill of lading in Korean law is regarded as one of the functions of delivery; that is, tradition longa manu, and thus it fulfills the requirement of delivery for the transfer of property. It has found that such differences between English law and Korean law basically originated in their underlying principles; the principle of consent and the principle of delivery and consent.

References

Atiyah, P. Adams, J. and Macqueen, H.(2001), *Sale of Goods,* 10th ed., Harlow: Longman.

Bradgate, R., (2000) Commercial Law, 3rd ed., London : Butterworths.

_____,(2000) *Commercial Law,* Chichester; Chancery Law Publishing

Choi June-Sun(2007) General Orovisions of Commercial Law and Law on Commercial Acts, Seoul; Sam Young Co.

Choi Ki-won(2002), Maritime Law Seoul : Pakyoungsa.

Cooke, Julian et al.(1993), *Voyage Charters.*

Debattista, C., (1982) "The Bill of Lading as the Contract of Carriage – A Reassessment of Leduc v. Ward," 45 MLR

_____, (1998) *The Sale of Goods Carried by Sea*, 2nd ed. London: Butterworths.

Drobnig, U.(2004) "Transfer of Property", in : A. Hartkamp et al. ed., Toward a European Civil Code, 3rd ed, Nijmegen: Kluwer Law International.

[32] KCmC Arts. 133, 820.

Gee, Steven(2001), "Construing Contracts with Mistakes in Them", *Lloyd's Maritime and Commercial Law Quarterly.*

Gaskell, N., et al.,(2000) Bills of Lading : Law and Contracts, London: LLP.

Goode, R.,(1995) Commercial Law, 2nd ed., London: Penguin

Guest, A., ed.,(1997) *Benjamin's Sale of Goods,* 5th ed., London: Sweet & Maxwell.

Howard T., (1993) "The Carriage of Goods Carried by Sea Act 1992," Journal of Maritime Law and Commerce

Ivamy, E.R. Hardy(1987), *Casebook of Shipping Law.*

Kidner R.,(1985) "Economic Loss: Anns, Junior Books and Bills of Lading," 48 MLR 352.

Lee, Byung-Mun, Jung-Ho Yang(2006), "The Bill of Lading Functioning as the Contract of Carriage in English Law", *Journal of Korea Trade*, Vol. 10, No.2.

Lee, Won-Jeong(2006), "A Comparative Analysis on the Identification of the Bill of Lading Carrier", *Journal of Korea Trade* , Vol. 10, No.2.

Mocatta A.,(1984) et al., Scrutton on Charterparties and Bills of Lading, 19th ed. London: Sweet & Maxwell.

O'Hare, C. (1978) "Shipping Documentation for the Carriage of Goods and Hamburg Rules," *52 Aust. L. J.*

Poor, W., (1968) *Poor on Charterparties and Ocean Bills of Lading,* 5th ed.

Reynolds, F.,(1993) "The Carriage of Goods by Sea Act 1992," *LMCLQ*

Tetley, W.,(1988) *Maritime Cargo Claims*, 3rd ed., Montreal: International Shipping Publication.

Tettenborn, A.,(1991) "Transferable and Negotiable Documents of Title: a Redefinition?" *LMCLQ*

Treitel, G. and Reynolds, F. ed.(2005), *Carver on Bill of Lading*, 2nd ed., London: Sweet & Maxwell.

Tyler, E., Vaines, Jr.,(1973) and Palmer, N. *Crossley Vaines' Personal Property*, London: Butterworths.

Urbach, A.(1985) "The Electronic Presentation and Transfer of Shipping Documents," in R. Goode ed., Electronic Banking-the Legal Implications, London: Financial World Publishing.

Wilson, J.,(2004) *Carriage of Goods by Sea,* 5th ed. Harlow: Pearson.

Zekos, G.,(1998) "Negotiable Bills of Lading and their Contratual Role under Greek, United States and English Law," 40(2) *Managerial Law* 5.

_____, (2004) "The Contractual Role of Documents Issued uner the CMI Draft Instrument on Transport Law 2001," *35 Journal of Maritime Law and Commerce* 99.

Journal of Global Business and Trade

Managing Commor Property Resources Through Ancestral Domains: The Case of Philippine Indigenous Fisheries

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ARTICLE INFO

Keywords:
ancestral domain,
ancestral waters,
common property,
open access,
property rights

ABSTRACT

The study considered the concept of ancestral waters as an alternative to common property rights that would possibly answer the pressing problem of non-exclusivity and subtractability accordingly in ocean fisheries. Results of the study showed that ancestral water seems to be similar to common property rights in terms of use rights, exchange rights, distribution entitlements, and management scheme and authority structure. However, ancestral waters is more specific as it applies only to ICCs/IPs. Since most of the fishing communities in the Philippines resemble the ICCs/IPs in terms of homogeneity in faith and ethnic nature, positive attitudes in taking responsibility of coastal resources, control and compliance to rules and regulations in the coastal areas, and determination of not leaving the place they have inhabited for several years, it is possible that the notion of ancestral waters would also apply to the coastal communities. The promising attributes of ancestral waters in ensuring sustainability may pave the way for considering community property rights for other coastal communities in the future.

I. Introduction

Over the past years, problems of managing an open-access resource have received increasing attention since there has been agrowing awareness that the stock of the natural resources have been diminishing (Nijkamp, 1997). Evidences show that among these natural resources, fishing is a troubled industry due to increases in fishing competition. The Philippine fisheries share the common dilemma as with the rest of the world – the *de facto* open-access situation of the fisheries. However, many initiatives were proposed and implemented to address this problem, either by private property or some sort of authoritarian centralized government structure. Still, it has failed to solve the problem.

In this regard, there has been a proposition to consider common property as the solution, since aquatic resources of the coastal zones, in their physical nature, are common property resources. It has also been proven in the literature that institutions based on common property have been good managers of the resources.

Moreover, they promise to help in solving critical resource issues as common property resources are believed to be an important component of the natural resource endowment of rural communities in developing countries. Nonetheless, ill-defined property rights, specifically the absence of common property rights for groups who manage coastal resources for a long period of time, will still lead to overexploitation of the resources.

II. Common-Pool and Open Access Resources

Most of our natural resources are said to be common-pool resources (CPR), i.e., any common goods or resources that are shared by a group of people such as air, water, forests and other natural resources (Cruz, 1999). In general, Gardner, et. al. (1990) looked at it as any natural or human-made facilities (or stocks) that generate flows of usable resource units over time.

Two important characteristics of CPRs are: (1) there is non-exclusivity, meaning that there is an exclusion problem related to defining and enforcing access rules, and (2) use is subtractable statistically and dynamically (Gardner, et. al., 1990). For small CPRs, enclosure of a resource would be possible, since it incurs a low cost. However, for resources like ocean fisheries, excluding potential beneficiaries from obtaining benefits from the resource would mean higher costs and technical impossibility. In terms of subtractability, the use of an individual of a resource would entail subtraction from the use units that would be available for another user, i.e. a rival in nature.

Common pool resources are more likely become vulnerable to depletion and degradation. So, the traditional solution to the problem of CPR is the institutionalization of private property rights. However, it does not apply to all resources, such as the fisheries. In fact, open access is the most appropriate picture of the fisheries. It is a situation where no one owns the resource and management and control is difficult to apply (Olive, 1993), access to the resource is free and open to all (Feeny et. al., 1990) and there is no property in such situation, only the opportunity to use something (Bromley, 1991). Thus, it is more appropriate to assert, "everybody's access is nobody's property" than "everybody's property, is nobody's property" (Bromley and Cernea 1989; Bromley, 1991). Hence, a scenario demonstrated by the absence of well-defined property rights.

Any regime would basically need an authoritative system which is able to ensure that the expectations of the rights holders are met. The existence of open access is a result of the breakdown of a management and authority system that should have introduced and enforced a set of norms of behavior of participants in relation to the natural resource (Bromley, 1991). To be more specific, it resulted from the extinction of communal or traditional property arrangements and institutions in the process of colonial development (Berkes, 1987). In such situations, each potential resource user has complete autonomy in using the resource, since no one can keep out another user from using it. Hence, the natural resource is subject to the rule of capture, and does not belong to anybody unless it is in someone's physical possession (Bromley and Cernea, 1989). In this view, the demand surpasses the capacity of the resource to sustain itself, and available technology can exploit the resource at much higher level. Thus, even before institutional arrangements and other efforts take place, depletion has already occurred rapidly (Feeny et. al., 1990).

III. State and Common Property Regimes

In a state property regime, ownership and control over the resource resides with the state. Resources may be used, but within the forbearance and limits set by the state (Cuevas, 1994). Sometimes, ownership resides with the citizens, management and control with the class of the bureaucrats, and use with a subset of citizens (Bromley, 1991). In many cases, the state has provided

sufficient exclusion. However, state governance does not necessarily ensure sustainable use, nor does it solve the problem of exclusion (Feeny, et al. 1990). In addition, this regime is too weak to effectively exercise its control and grant access to the resources and limit others from extracting the same. An example of government failure is the overfishing in Philippine fisheries.

Common property is sometimes referred to as communal property, wherein the resources are controlled by identifiable community of users (Berkes, 1987). These are structures in which people within a group have co-equal use rights, specifically the rights that prohibit the use of those resources. However, this does not mean that rights are lost through non-use. Also, it does not mean that over a period of time, co-equal owners would necessarily yield the same quantities of the resource for every individual user.

Common property regimes are made up of social units with defined boundaries and membership. These units share common interests, culture and authoritative systems (Berkes and Farrer, 1989). Tribal groups and extended families are possible examples. These groups have customary ownership of the resource, and the community takes on the responsibility of managing the resource based on their norms and beliefs (Olive, 1993). Institutions based on the concept of "common property" have performed socially beneficial roles in managing the natural resources from pre-economic history up to present. The same institutions promise to help in solving critical resources problems in both the developed and developing countries. There have been proofs that common property regimes have long functioned to control access and exploitation of natural resources in a sustainable manner (Ostrom 1990).

Common property management was overlooked by those who were engrossed with the extreme solutions of command and control management (Hardin, 1968). Since it is believed that common property institutions are effective, if not essential, components of successful future management of natural resources, as to quote Ostrom (1994) "While some things are best done by governments or market, others are more appropriately done by community-level institutions, that is, 'neither market nor state'," there has been an increased inclination towards this concept as a promising tool in answer to the fisheries' problem. Also, evidence shows that traditional common property regimes are still found today, which implies that they were successful in managing resources, having escaped the effects of colonialism and market penetration (Ostrom, 1994). Ostrom in 1990 even documented common property resources that have existed up to present: high-mountain grazing commons in Switzerland, agricultural feudalism in Japan, three cases of irrigation collectives in Spain, and an irrigation in the Philippines. Thus, common property institutions are said to be the most important means of regulations to address the fisheries' problem.

IV. Community-Based Resource Management

Management of resources by the central government and privatization are thought to be the best way to answer the problem of environmental degradation. However, it only spurred to the development of *de facto* open access regimes, which follows the destruction of existing common property regimes (Ostrom 1990; Feeny, et al. 1990). Thus, Ostrom (1994) stressed the point that local common-property institutions are effective, if not essential components, for successful future management of natural resources.

In revitalizing the concept of common property, community-based resource management (CBRM) was introduced. CBRM is intended as an integrated approach to area development. It responds to resolving conflicts over multiple resource use and attempts to integrate the sociopolitical and economic aspects with the biophysical elements of resource management. It emphasizes the fact that environmental problems have

both social and technical aspects. Thus, CBRM is about allowing people to make their own rules and decisions and to enforce those rules themselves.

The continuous advocacy of common property regimes in resource management was very much apparent since community-based resource management is the trend nowadays. The emergence and subsequent proliferation of CBRM in the Philippines and in other countries is a testimony to the increasing acknowledgement and realization of the significance and capability of the communities to manage their own resources. The success of such management systems relies heavily on the creation of favorable institutional arrangements.

For the past twenty-five years there have been significant coastal resource management efforts in the Philippines (Juinio-Meñez, 2002). Among all these efforts, community-based coastal resources management (CBCRM) is the prevalent approach to address human and natural resource issues in coastal areas alike. Given the inefficiency of state management, it is believed to be a means to accelerate the management of coastal resources, for the long-term benefit of the present and the future generations. It is also a way of addressing equity, poverty alleviation, and more importantly, the empowerment of marginalized coastal dwellers: the small fishers in particular. Nonetheless, it can only be viable and effective when defended by an authority structure capable of enforcing legislation.

In a case study analyzing the long-term impacts of coastal resources management for the Philippines, it was concluded that fishermen households are highly homogenous in faith and in ethnic origin, which make a coastal resource management favorable. The study also found out that fisherman households have lived in their *barangays* for a long time and have no plans of transferring to other places. Also, fishermen, in general, have many positive attitudes and values, including the sense of responsibility to the coastal resources they exploit. Further, it was found that the results of improvement in terms of fishermen's control over resources and community compliance to rules and regulations are consistent over time (Israel et. al., 2003).

V. Community Property Rights

A community-centered natural resource management regime does not only provide a viable alternative in the face of the state's failure to manage the resource, but it also recognizes that the communities have the rights over the resources. According to Cruz (1999), the assignment of definite property rights to these communities is the most efficient way, if not the only way, to avert the tragedy of the commons. There is a need for new ground rules that would protect common property in the same manner that there are rules that protect individual or private property.

Common property regime is recognized in the Philippine Constitution, characterized by the recognition and promotion of the rights of the indigenous people. However, only state property and private property primarily exists in the Philippine laws. In the endeavor of legalizing common property rights, Cruz (1999) made a thesis on the opportunity of a community title granted to coastal communities, which was regarded as the best way to prevent overexploitation and destruction of the Philippine fishing grounds. But, according to Cruz (1999), the Philippine national government still does not recognize group ownership. Hence, it was concluded in her study that it is very much possible for full ownership to be given to a group of people, not necessarily to an incorporated group. It would incorporate rights to use, possess, exclude other users, and harvest the yield of coastal resources at the very least.

VI. Ancestral Domains and Ancestral Waters

The quest for such recognition in the Philippine Constitution would take several years before it would really be implemented. In lieu of this, the Indigenous Peoples' Rights Act (IPRA) was passed in 1997 and gave legal recognition to the claims of communities to the land they have occupied "since time immemorial." It mandates the recognition and promotion of the rights of Indigenous Cultural Communities (ICCs) and/or Indigenous Peoples (IPs). It takes into account the indigenous concept of ownership – ancestral domains and all resources found therein shall serve as the material bases of their cultural integrity. Generally, it holds that these are private property but community property, which belongs to all generations. Therefore, it cannot be sold, disposed or destroyed. At the same time, it covers sustainable traditional resource rights.

According to the IPRA of 1997, also known as Republic Act (R.A.) 8371, ancestral domains refers to all areas generally belonging to the ICCs/IPs. Many have been awarded of ancestral domain claims i.e., rights to claim ownership over lands, bodies of water traditionally and actually occupied by the tribe, sacred places, traditional hunting grounds and fishing grounds: the right to regulate the entry of the migrant settlers and organizations into the domain. Table 1 shows the number of approved Certificate of Ancestral Domain Title (CADT) as of 2010.

Table 1: Number of Approved CADTs, Total Area Awarded and IP Beneficiaries, 2002 -2010.

YEAR APPROVED	NO. OF CADTs	TOTAL AREA (in Hectares)	IP POPULATION
2002	2	41,255.97	18,283
2003	9	326,091.33	58,389
2004	18	236,435.73	73,421
2005	9	237,004.73	36,743
2006	18	269,049.42	50,847
2007	2	94,425.75	22,585
2008	38	1,288,667.81	313,024
2009	45	1,106,174.92	269,317
2010	15	660,510.27	69,786
TOTAL	156	4,259,615.93	912,395

Source: NCIP Website

This has led to the addition of ancestral waters into the new Ancestral Domains Act. Ancestral waters, as insinuated in the definition of ancestral domains, is a part of the ancestral domains that constitutes the bodies of water necessary for the assurance of the economic, social and cultural welfare of the ICCs/IPs. These are the seas - inland waters, coastal areas and traditional fishing grounds that sustained the community for centuries as they derive marine resources for their subsistence and for other traditional activities. Thus, it is part of the people's lives, and removal of it endangers the entire culture of the community. At present, there are a total of 13 approved CADTs with ancestral waters as shown in Table 2.

Table 2. Number of Approved CADTs, Total Area of Ancestral Waters Awarded and IP Beneficiaries, 2002 -2010.

Location	Tribes	Total Area (Ha)	Ancestral Waters (Ha)	IP Population (Beneficiaries)
Municipality of Itbayat, Province of Batanes	Ichbayat-Ivatan	89,163.42	80,174.36	3911
Barangay of Babuyan Claro, Municipality of Calayan, Province of Cagayan	Ibatan	88,924.37	82,042.88	1221
Baggao, Cagayan	Agta	26,785.83	10,664.34	742
Various baranggays in the municipality of Gattaran; Lallo; Buguey; Sta. Teresita; and Gonzaga, Province of Cagayan	Agta	107,903.39	~ 10,79033.9	1038
Purok six (6), Barangay of Tipo, Municipality of Hermosa, Province of Bataan	Aeta	4,355.93	71.81	759
Barangays of Zabali, Dibut and Pingit, Municipalities of San Luis and Baler, Province of Aurora	Dumagat	5,983.20	2,957.37	553
Barangays Banuang Daan and Cabugao, Municipality of Coron, Province of Palawan	Tagbanua	24,520.76	16,958.00	1358
Calauit Island, Brgy. Buluang, Municipality of Busuanga, Province of Palawan	Tagbanua	55,539.11	51,855.87	977
Various baranggays in the municipality of General Nakar, Province of Quezon	Dumagat	163,641.46	18,760.76	3515
Various baranggays in municipalites of Quezon and Narra, Province of Palawan	Tagbanua	31,409.93	8,964.44	1682
Banton Island and Gakot Island, Province of Romblon	Bantoanon	120,743.72	117,614.35	7143
Barangays of Sangali and Victoria, Zamboanga City	Bajau	191.23	153.5477	292
Various baranggays in Zamboanga City & Province of Zamboanga del Norte	Subanon	12,396.57	4,546.05	3459
TOTALS		731,558.92	221,882.19	26650

Source: NCIP - ADO

Various sections of R.A. 8371 enumerated the rights of the claimants of ancestral domains, which include ancestral waters. These are (1) right of ownership, (2) right to develop natural resources, (3) right to regulate entry of migrants, (4) right to safe and clean air and water, (5) right to claim parts of the reservations, (6) right to resolve conflict and (7) right to self-governance. However, rights are always accompanied by responsibilities. The ICCs/IPs who occupy duly certified ancestral waters are then responsible of maintaining ecological balance, i.e. to preserve, restore, and maintain a balanced ecology by protecting the flora and fauna, and all other reserves; and to observe and comply with R.A. 8371 and its rules and regulations.

With respect to different bundles of rights, common property rights and ancestral waters are very much similar to each other, though there is little difference between the two as shown in Table 3.

Table 3. Bundles of Rights for Common Property and Ancestral Waters

RIGHTS	COMMON PROPERTY	ANCESTRAL WATERS
Use Rights	There are co-equal rights to withdraw resource units from a particular resource base for members of the identified community of users and right to exclude others who do not belong to the group.	Individuals identified in the census submitted by the ICCs/IPs have the rights over the benefits from the waters (fish and other marine resources) and right to exclude others as to regulate entry of migrants that are forced by their social, economic, and political interests.
Exchange Rights	Rights are non-transferable	Claims can be transferred to legal heirs and other members of the Indigenous Community concerned in accordance with customs and traditions. However, property cannot be sold, disposed or destroyed.
Distribution Entitlements	Members of the cooperative, union or the community itself have a claim over the benefits provided for by the resource.	Claimants have the right to benefit and share profits from the allocation and utilization of marine resources from the bodies of water.
Management Scheme	There are rules defining of who is in (or out of) the resource management group. Only some have the right to be in, yet each member is obliged to obey the rules of the group as they expect others to do the same thing. Common property management refers almost exclusively to local self-governance.	With respect to the right to self-governance and self-determination, the ICCs/IPs have the right to control, manage, develop, protect, conserve and sustainably use the waters and the fishing grounds; right to regulate any activity; responsible of observing customary laws and the RA8371 and its implementing rules and regulations
Authority Structure	Breakdown of authority system would lead to open access	Customary laws and cultural traditions and practices apply. All members of the community are consulted yet the decisions are embodied by the decisions of the Council of Elders. National laws also apply as well as the regulations provide. Conflicts shall be resolved in accordance with the customary laws, which in case of default, be settled through the intervention of government agencies.

Source: Cuevas, 1994

VII. Indigenous Coastal and Fishery Resources Management

The Tagbanuas harvest more from the sea than from the forest. Believing that it is an integral part of their lives, it propelled them to fight for government's recognition of their claims over ancestral waters. The way they use and manage the resources is within the context of their culture: the *panyaan* (sacred areas at sea) and the *amlaran* (sacred areas on land), are deemed to be restricted areas, under observance of customary laws that governs resource use and access, and the role of the community elders in observing traditional laws, especially in imposing sanctions and penalties as a means of control and discipline. These sacred areas are considered crucial to the sustainability of the natural resources, their ancestral domain, and the existence of both present and future generations of their people. Thus, having this conviction, the Tagbanuas prohibit fishing or gathering of resources in the *panyaan* and *awuyuk* both of the Tagbanuas and non-Tagbanuas (Dalabajan, 2001; SARAGPUNTA and PAFID Reports, 2001).

The Tagbanuas attribute the decline in their fish catch and destruction of the fishing grounds to the modern and more noxious fishing methods, such as blast fishing, *muro-ami,* the use of sodium cyanide, and use of compressors. Likewise, the entry of commercial fishing vessels is considered illegal, because they consider the very large fish catch of these vessels to deplete the resources rapidly and to be unsustainable. These modern techniques are definitely prohibited by the Tagbanuas because they believe that these deplete the fishing stock and destroy the environment. However,

some of them also engage in these destructive practices due to poverty. However, based on documents and interviews, traditional fishing gear such as spears *(sibat)*, bow and arrow *(pana)*, hook and line *(kawil)*, and other less invasive and non-destructive fishing gears were used in the past.

VIII. The First Ancestral Waters Certificate of Ancestral Domain Claim

The onslaught of destructive fishing methods, such as dynamite and cyanide fishing, drove the Tagbanuas to act towards their Certificate of Ancestral Domain Claim (CADC), which would include not only their ancestral lands but the waters as well (Zingapan and De Vera 1999; Dalabajan 2001). With this, they aimed to protect the coral reefs from these destructive practices, since the Foundation officers were convinced that if the indigenous seas would not be protected, they would not be able to survive in their ancestral lands as traditional small fisherfolk.

However, the awarding of the CADC did not come on a silver platter for the Tagbanuas and for Philippine Association for Intercultural Development (PAFID), who has supported them in extending their claim to the marine territories (Belen, 1998). For five years it went through numerous hurdles, as opposed by the local, provincial, and national governments who have filed their claims over the island in the interest of making the island one of the world's tourist destinations. Finally, after numerous meetings and consultation, consistent follow-ups and satisfaction of all the requirements, it was accepted that the ancestral lands and ancestral waters claim of the Tagbanuas has been their home since time immemorial. Hence, it was recognized to be the first-ever ancestral waters CADC on June 5, 1998, which strengthened their claim.

It was a great joy for the Tagbanuas of Coron Island having been given the ownership and management rights over the territories and all its resources that they believe to be their inheritance from their ancestors. This gave them more confidence with their rights, especially against non-Tagbanuas, who desire to exploit them and the natural resources. Also, they still manage the resources in their own indigenous ways and keep a special guard over the resources. In terms of governance, they stand alone and the Coron municipal government does not interfere and recognizes their autonomy. They observe their customary laws, particularly when it comes to intruders and lawbreakers.

Encroachment, which is an indication of exclusivity, is basically the reason why the Tagbanuas clamored for their exclusive rights over the seas. Both the government and private companies have wanted to develop the area to be a tourist spot, diving sites and beach resorts. Large commercial fishing vessels of migrant fishermen from neighboring provinces such as Mindoro, Batangas, and Quezon, as well as illegal fishers using dynamite and sodium cyanide, were also coming into the territory.

All these types of encroachment are still rampant in the area, which government and non-government organizations alike are monitoring. Nonetheless, the natives prevented it by introducing a “VISA” or an entrance fee that has to be paid before staying in a place on the premise that the Free and Prior Informed Consent (FPIC) of the community was already given. To better ensure the protection of the territory, the Tagbanua guards travel with the visitors.

On the other hand, performing fishing activities would only necessitate FPIC of the whole community, provided that fishing methods that will be utilized are non-destructive in nature. Otherwise, any fishing activity would not be possible and would be considered to be illegal, and would have to be punished according to their customary laws. In the same manner, other activities, such as conducting research work, would only need the FPIC of the Tagbanua community, as provided by the IPRA. The guards also accompany individuals who conduct activities, such as researches.

Though the members are exerting effort in guarding their domains against encroachers, still, the Tagbanuas have some difficulty in their execution of penalties for encroachers. They have been receiving death threats from the people that they have apprehended.

IX. A Final Note

Coastal Resource Management in the Philippines demonstrates homogeneity in faith and ethnic characteristics of the numerous coastal communities. Further, fishermen have positive values and attitudes in taking responsibility of the coastal resources they exploit, along with the determination of not leaving the place that they have inhabited for a long period of time. Also, there is consistency in the improvement of control and compliance to rules and regulations in the coastal areas with coastal resource management projects. In this regard, the notion of ancestral waters would also be applicable to this kind of coastal areas. The promising attributes of ancestral waters in ensuring sustainability may pave the way for considering community property rights for other coastal communities in the future.

Though the ICCs/IPs have the title of their ancestral domains, the assurance of maintaining their property is still dubious due to poverty. It is the major thing that impels the natives to have their domains either sold or allowed to be destructed just to support their daily physical needs. Therefore, alternative livelihoods should be provided to augment the earnings of the ICCs/IPs like the Tagbanuas. Likewise, a provision of free education is needed in order to give the natives, afterwards, the opportunities to work on other things to generate higher incomes.

The right of the ICCs/IPs in regulating entry of migrants does not end in the observation of customary laws in times of encroachment. Most of the time, there are death threats to the natives. For this reason, it is necessary for the ICC/IP concerned and the local government to work together, rather than working in isolation, to better apprehend and make violators pay for the consequences of their actions.

There is a necessity of educating or disseminating information concerning the claim, especially the ancestral waters, of the ICCs/IPs to the non-IPs. A lot of people do not recognize the seas and oceans to be owned by people and have it entitled to them. Likewise, the natives themselves should be educated to avoid possible manipulations by different people from various government and non-government organizations.

Literature Cited

Belen, A.R. (1998). DENR Awards "Ancestral Land and Waters" to the Tagbanwa of Palawan. Unpublished.

Berkes, F. (1987). "The Common Property Resource Problem and the Fisheries of Barbados and Jamaica." *Environmental Management* 11(2), 225-235.

Berkes, F., & Taghi Farrer, M. (1989). "Introduction and Overview". Common Property Resources: Ecology and Community-Based Sustainable Development". Belhavan Press, London, WC2E 9DS.

Bromley, D. W. (1991). " Environment and Economy: Property Rights and Public Policy". Oxford, UK, Oxford University Press.

Bromley, D.W., & Cernea, M.M. (1989). "The Management of Common Property Resources: Some Conceptual and Operational Fallacies, World Bank Discussion Paper (57), The World Bank, Washington, D.C.

Cruz, H. P. (1999). "Existing Property Regimes in the Philippines and Opportunity for Community Title to Coastal Resources," Power, Spaces & Titles: Issues in Community-Based Coastal Resource Management, *Lundayan Journal* (Special Edition). Quezon City: Tambuyog Development Center.

Cuevas, A.C. (1994). Institutional Arrangements in Common Pool Resources: The Case of Fishery. Undergraduate Thesis Submitted to the Faculty of

the Department of Economics, College of Economics and Management, UPLB.

Dalabajan, D. (2001). "The Healing of a Tagbanua Ancestral Homeland," In E.M.Ferrer, L.P. de la Cruz, and G.F. Newkirk [Eds.] Hope Takes Root: Community-based Coastal Resources Management Stories from Southeast Asia. Coastal Resources Research Network.

Feeny, D., Berkes, F. , McCay, B.J., & Acheson, J.M. (1990). "The tragedy of the Commons: Twenty-two years later." *Human Ecology* 18(1):1-19.

Gardner, R., Ostrom, E., & Walker, J. (1990). "The nature of Common-pool Resource Problems." *Rationality and Society* 2 (July), 335-358.

Hardin, G. (1968). "The Tragedy of the Commons", *Science*, 162, 1243-1248.

Hardin, G., & Baden, J. (Eds). (1977). "Managing the Commons." San Francisco: W.H. Freeman and Co.

Juinio-Meñez M.A. (2002). "Myths and realities of participation in Philippine CBCRM: Lessons from an analysis of who participates in what." Presented at "The Commons in an Age of Globalisation," the Ninth Conference of the International Association for the Study of Common Property, Victoria Falls, Zimbabwe, 2002.

Nijkamp, P. (1997). "Optimal Control of Exhaustible Resources," Studies in Regional Science and Urban Economics: Theory and Application of Environmental Economics. New York: North Holland Publishing Company.

Olive, S. (1993). "Competition and Dispute Settlement for Fishery Resources: A case study of Property Regimes in Sarangani Bay." Kasarinlan: *Philippine Journal of Third World Studies*, Vol 9, No 1

Ostrom, E. (1990). "Governing the Commons: The Evolution of Institutions for Collective Action." New York: Cambridge University Press.

Ostrom, E. (1994). "Neither Market Nor State: Governance of Common-Pool Resources in the Twenty-first Century." Lecture Presented at International Food Policy Research Institute, Washington, D.C. June 2.

SARAGPUNTA and Philippine Association for Intercultural Development (PAFID) Reports.(2001).

Zingapan, K., & de Vera, D. (1999). "Mapping the Ancestral Lands and Waters of the Calamian Tagbanua of Coron, Northern Palawan." Quezon City: Philippine Association for Intercultural Development.

The Journal of Global Business and Trade

Journal of Global Business and Trade

Financial Integration, Economic Growth and Financial Development: Evidence from the Philippines

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ARTICLE INFO

Keywords:
growth, financial development, international financial integration, regional financial integration

ABSTRACT

Does a country benefit from increased financial integration? This study investigated whether the increasing degree of international (IFI) and regional financial integration (RFI) of the Philippines benefit its economy and the financial sector. The levels of stocks and flows of capital were used as IFI indicators, while interest rate convergence measures were used to measure RFI among Asia Pacific Economic Cooperation (APEC) member countries. The Ordinary Least Squares method was used to relate IFI and RFI indicators with the degree of Philippine economic growth and financial development.

Philippine economic growth was found to be positively influenced by the stock of capital flow and inflow, but is negatively affected by the convergence of deposit and lending market rates of APEC countries. On the money market convergence rates and the stock of capital flow were found to have negative impacts on the development of financial markets. However, it was also found that financial development is enhanced by annual flows of capital and the convergence of lending and deposit market rates among APEC countries. These mixed results, along with a number of insignificant coefficients render the study inconclusive with regards to the relationship of financial integration, growth and financial development in the Philippine context.

I. Introduction

In the recent decades, global financial integration has substantially increased. At the start, it was seen in growing capital flows between the developed countries. However, in response to the removal of capital controls, financial innovation and technological progress, financial integration spread to the emerging market economies. Aside from increased capital flows, financial integration has also been evident in frequently high correlations between asset yields or prices,

particularly for high-yield corporate bonds and equities (Andersen and Moreno, 2005).

Literature says that increased integration with global financial markets has been key in imposing market discipline and has helped to improve the quality of macroeconomic management. Moreover, financial integration in emerging market countries has been driven by a belief that it would increase growth and reduce volatility (Andersen and Moreno, 2005).

Yet Andersen and Moreno (2005) say that the conclusions from a comprehensive study (Prasad et al, 2003) of the empirical evidence are disappointing and sobering. Even with a systematic examination of the evidence, Andersen and Moreno (2002) also say it is difficult to establish a robust relationship between financial integration and growth. They also ask: does this finding imply that the economic literature was wrong (or used the wrong model) and that financial integration was a mistake?

II. Background

The Philippines was one of the earliest Southeast Asian economies to institute financial liberalization programs. In the 1980s, a series of financial reforms alongside trade reforms were imposed to allow the easy flow of resources. In 1991-1992, the country deregulated foreign exchange transmissions. It was also during this period when the Philippine banking sector allowed easy domestic bank entry and branching. The passage of Republic Act 7721 which liberalized the entry and scope of operations of foreign banks allowed a more open domestic financial market (Tan and Paderanga, 1997 and Pasadilla and Milo, 2005 as cited in Bermudez, 2009).

Austria, (2001) in a study focused on the country's multi-track approach to trade and investment liberalization, argued that greater openness and economic integration require strategic policy formulation. Countries need to consider the national, regional and multilateral fronts. The presence of domestic industries that are efficient and competitive are a key input. Economic integration also requires that participating economies have already attained a high level of competitiveness and maturity of their production structures to be able to face regional and global competition (Onguglo and Cernat, 2000). Likewise, as industries become competitive, they require bigger markets to realize economies of scale. Regional integration and multilateral cooperation then become important as they provide a country the opportunity to penetrate larger markets.

APEC is an association of 21 member economies geared towards enhancing economic growth and cooperation in the Asia-Pacific region. Over the years, APEC has reduced tariff rates and other trade barriers. The main goals of APEC are directed to the promotion of sound policies of sustainable and broad-based growth among its member economies, better corporate governance and social accountability, stable and efficient financial markets and greater economic cooperation, integration and openness. (ADB Technical Report, 2006 as cited in Bermudez, 2009).

III. Objectives

The first part of the paper aims to investigate the effects of international financial integration on economic growth and financial development of the Philippines. The analysis covers the period from 1977-2007 and will use quantity-based measures, i.e., the accumulated stock of capital outflows and inflows and the annual level of capital outflows and inflows as a share of the GDP.

The primary purpose of the second part is to empirically investigate the effects of regional financial integration on (i) Philippine economic growth and (ii) local financial development. The period covered is 1987-2007. This part will use price-based measures, i.e., financial market interest rates as measures of financial

integration. These interest rates are: domestic deposit rates, lending rates and money market rates.

IV. Financial Integration, Growth and Financial Development

Financial integration has been defined as the process through which a country's financial markets become more closely linked with those in other countries. It therefore implies the elimination of barriers for foreign financial institutions from some countries to operate or offer cross-border financial services in others (IADB, 2002). This may imply linking banking, equity and other types of financial markets.

Financial integration may emerge as a result of formal efforts to integrate financial markets with particular partners, especially among those that share membership in a regional integration agreement (RIA). Integration in this sense may involve eliminating restrictions to cross-border financial operations by firms from countries in the same RIA, as well as harmonizing rules, taxes and regulations between the member countries.

However, financial integration can also emerge in the absence of explicit agreements. Forms of integration such as foreign bank entry into domestic markets, securities trading abroad and direct borrowing of domestic firms in international markets have for the most part occurred without the need for formal agreements.

Financial integration has also been defined as a situation where all relevant market participants face a single set of rules when dealing with financial instruments and/or services, have equal access to these instruments and/or services and are treated equally when they are in the market (Baele et al, 2004 as cited by Bermudez, 2009). This definition stems from the "Law of One Price" (LOP) which is widely recognized as the essential principle of economic integration. Arbitrage between different markets forms the basic drive for market integration and price convergence tends to result in efficiency gains in an integrated market (Qin, et al, 2007).

An environment of financial stability and the processes of financial integration and development are in general mutually reinforcing. A stable financial system contributes to the system's development and integration. Likewise, a more integrated and innovative financial sector enhances competition, facilitates portfolio diversification and access to funding, improves risk-sharing opportunities and increases market liquidity. As a result, the shock-absorbing capacity of the financial system is improved, thereby enhancing financial stability (Papademos, 2010).

However, a highly integrated and developed financial system does not always and necessarily strengthen financial stability. Under certain conditions, Papademos (2010) claims that financial integration and certain forms of financial innovation can contribute to the build-up of vulnerabilities and the emergence of systemic risks. For instance, in the years preceding the crisis, while the global financial system evolved at a rapid pace, the proliferation of complex and opaque financial products, the increased interconnectedness of markets and institutions in an environment of enhanced competitive pressures and excessive credit growth, encouraged risk-creation and risk-taking; it increased the scope for contagion across institutions, markets and borders. The emergence of systemic risks and the eventual eruption of the crisis were also the consequence of the fact that corporate governance, risk management, market infrastructures for derivative products as well as supervisory practices and regulatory frameworks did not keep up with the rapid transformation of the financial systems (Papademos, 2010).

With financial integration, SMEs will now have access to wider financial markets, which is synonymous with removing some forms of credit constraints. From the viewpoint of financial institutions, businesses

become better clients because they have less exposure to individual risks. There is also less exposure to credit risk as the number of clients increases. Meanwhile, from the perspectives of firms and financial intermediaries, integrating into larger markets is also beneficial. Another advantage linked more specifically to formal integration agreements is regulatory independence. When the financial system is small and there are direct links between regulators and banks, supervision is usually not guided by independent policies. Integrating formally can reduce this risk, as it increases the number of participants and interests governing the financial system. In an integrated system, regulatory principles are driven by supranational principles that are likely to be less influenced by domestic interests (IADB, 2002).

How financially integrated are countries in the Asia-Pacific nation, both globally and among themselves? Studies note that Asia is less regionally integrated than Europe in terms of finance (Lee, 2008, Eichengree and Park, 2004). It is also usually commented that trade integration has progressed further than financial integration in the region (Corbett, 2007).

Measures of financial integration are broadly divided into three types: price measures, quantity measures and regulatory or institutional measures. Price measures are based on assumptions that in fully "integrated", or completely open, markets, arbitrage would bring price equality on similar assets. There is a hierarchy of measures with increasingly stringent assumptions and implications about the degree of integration. At the least stringent level, covered interest parity would show a basic degree of financial integration while at the top of the pyramid, real interest parity would indicate not only integrated markets but also similarity of risk preferences. The fundamental question remains whether the financial assets being compared are truly identical as required by theory (Corbett, 2007).

The second type of measures are quantitative measures which capture the extent of cross-border financial flows or the extent of cross-border holdings of foreign assets and liabilities. These measures have no particular theoretical foundation but do at least show the extent of actual flows (or stocks) of cross-border financial activity.

What drives the process of financial integration? The major explanation seems to be trade. Countries with large trade flows will likely also have large capital flows relative to GDP. There is debate about whether finance follows trade or the reverse. Trade integration has been a market-driven, bottom-up process in Asia, and it is probable that the same will be true of financial integration.

What is less certain is the role played by policy and financial structure variables in promoting greater integration. Ghosh (2006) lists the impediments to greater cross-border transactions to include differences in market practices and infrastructure, such as trading platforms and conventions, procedures for clearance and settlement and custodian systems, differences in rating standards, national legal and regulatory frameworks and accounting and auditing practices. The "underdevelopment of financial markets", inadequate financial and legal structure, low auditing and accounting standards, low transparency, and weak corporate governance (Lee, 2008) have also been pointed out.

V. Methodology

To measure the effects of financial integration on economic growth, the paper used the following equation:

$$Growth = \alpha + \beta FI + \gamma X_t + \mu D_l + \varepsilon_t \quad \text{where}$$

Growth = growth rates of real GDP per capita

FI = degree of financial integration (international or regional)

X_t = matrix of control variables

D_l = dummy variable

For RFI: representing the period 1989-2007 where 1= 1989-2007 observations and 0 otherwise

For IFI: for the year 1997 where 1= observation in 1997 and 0 otherwise

The control variables are: stock activity (ratio of the total value of domestic stock transactions as a share of GDP), inflation (growth rate of the consumer price index), government balance (government fiscal balance divided by GDP), and trade openness (exports plus imports divided by GDP). For the IFI equation, the dummy variable was added to control for the effects of the 1997 Asian Financial Crisis. For the RFI equation, the dummy variable was included to find out if post-APEC formation had an impact on Philippine economic growth.

Meanwhile, the estimating equation to measure the relationship of financial development with RFI is:

$$FD = \alpha + \beta FI_t + \gamma X_t + \mu D_l + \varepsilon_t \text{ where}$$

FD = indicator of the level of financial development. Four measures were used: private credit, stock activity and bank deposits to GDP

FI = degree of regional financial integration (international or regional)

X_t = matrix of control variables

D_l = dummy variable representing the period 1989-2007 where 1= 1989-2007 observations and 0 otherwise

(not present in the IFI equations)

Private credit is defined as the total loans made by the banking sector to the private sector as a percent of GDP. Stock activity is measured by the market value of listed shares as a percent of GDP. The bank deposits to GDP ratio shows the ratio of demand, time and savings deposits in deposit money banks and indicates the size, depth and access to domestic financial markets. The control variables were: quarterly change in the average inflation rate, trade openness, changes in the real effective exchange rate and the ratios of the quarterly current account balance and capital account to quarterly GDP. A dummy variable representing observations for the post-APEC formation years was also included.

5.1. Measures of Financial Integration

For international financial integration (IFI) indicators, the paper used quantity-based measures, i.e. measure of the volume of capital flows adopted from Lane and Milesi-Ferretti (2000). The advantage of using these measures is that they are widely available and easy to obtain. They are also objective measures of capital restrictions because actual statistics of capital flows are used. A disadvantage of using these measures is that many factors influence capital flows such as economic growth and policies.

a. Stock of Capital Flows - the stock of a nation's foreign assets plus liabilities as a share of GDP
   SCF = (CFDIAH + CFDILH + PA + PL)/GDP
   Where:
   SCF = Stock of Capital Flows
   CFDIAH = Foreign Direct Investment Abroad
   CFDILH = Foreign Direct Investment in Country
   PA = Portfolio Investment Assets
   PL = Portfolio Investment Liabilities
   GDP = Gross Domestic Product

b. Flow of Capital - the FDI and portfolio inflows and outflows as a share of GDP
   FC = (ΔCFDIAH + ΔCFDILH + ΔPA + ΔPL)/GDP
   Where:
   FC = Flow of Capital
   ΔCFDIAH = Flows of Foreign Direct Investment Abroad

ΔCFDILH = Flows of Foreign Direct Investment in Country
ΔPA = Flows of Portfolio Investment Assets
ΔPL = Flows of Portfolio Investment Liabilities

c. Stock of Capital Inflows - the stock of a nation's foreign liabilities as a share of GDP
SCIF = (CFDILH + PL)/GDP

d. Inflows of Capital - FDI and portfolio inflows as a share of GDP.
IFC = (ΔCFDILH + ΔPL)/GDP

The paper adopted the measures of the Asian Development Bank Asia Regional Integration Center for the measures of regional financial integration. These are the mean differential of the APEC member economies' financial market rates in relation to the Philippines and the coefficient of variation of domestic deposit market rates, lending market rates and money market rates.

For example, the domestic deposit rate mean differential (DDRD) is given by:

$DDRD_t = \{\Sigma i (|DDRPhil, t| - |DDRi, t|) / No. of Economies\}$ where

i = other APEC member economies
DDRPhil, t = domestic deposit rate of the Philippines for t-period
$DDR_{i,t}$ = domestic deposit rate of APEC member economy for t-period

The coefficient of variation is given by:

$CV(DDR)_t = \{ (SD_{t\,(APEC)} / Mean_{\,t\,(APEC)})\}$ where

$SD_{t,\ APEC}$ = APEC member economies domestic deposit rate standard deviation for t-period
$Mean_{\,t,\,APEC}$ = APEC member economies domestic deposit rate mean for t-period

VI. Results and Discussion

The regression models were estimated via Ordinary Least Squares (OLS) method with Newey-West standard errors to account for heteroscedasticity and autocorrelation problems. Through the Durbin-Watson test, error terms of the regression models were found to be serially correlated. All models were found to be statistically significant at 5%, and no serious multicollinearity problems were detected.

VII. IFI, Growth and Financial Development

The level of the stock of capital flows and capital inflows were found to have a significantly positive impact on the economic growth of the Philippines (see Table 1). This finding supports the claim that greater financial integration with the rest of the world can contribute to economic growth through the accumulation of capital stock coming from the foreign sector. However, the annual flow and inflow of capital levels were found to have an insignificant effect on economic growth. Hence, the link between IFI and economic growth in the Philippine's case remains ambiguous. The adjusted R-squared of the models ranges from 37% to 45%.

Table 1.Coefficient Estimates of Economic Growth and International Financial Integration

	IFI Indicators			
Explanatory Variable	Stock of Capital Flows	Flow of Capital	Stock of Capital Inflows	Inflow of Capital
Constant	0.392*	0.081	0.389*	0.081
IFI Indicator	0.626*	-0.324	0.799*	-0.193
Stock Activity	-0.626	-0.147	-0.529	-.0.122
Inflation	-0.686**	-0.730**	-0.693**	-0.718**
Government Balance	3.818**	3.228**	3.963**	3.095**
Trade Openness	-0.545*	0.079	-0.547	0.066
Dummy Variable for Year 1997	-0.361**	-0.440**	-0.369**	-0.431**

**significant at 1% *significant at 5%

The bank to deposit-to-GDP ratio is positively affected by flow and inflows of capital, but the impacts of the stock IFI variables are insignificant. On the other hand, stock market activity is positively affected by the stock of capital flows and inflows. However, the flow IFI variables have a significant negative impact on stock market activity (see Table 2). It was also found that all IFI indicators have insignificant impacts on private credit. The adjusted R-squared of these models ranges from 75% to 96%. With these mixed results, a definite conclusion cannot be made regarding the IFI-financial development nexus.

Table 2. Coefficient Estimates of Financial Development Indicators and International Financial Integration

	Financial Development Indicator					
Explanatory Variables	Bank Deposit - to- GDP Ratio		Stock Market Activity			
Constant	-0.056	-0.060	-.007	-0.061*	-0.011	-0.061*
Stock of Capital Flows	—	—	0.121*	—	—	—
Flow of Capital	0.641*	—	—	-0.265**	—	—
Stock of Capital Inflows	—	—	—	—	0.158*	—
Inflow of Capital	—	0.691*	—	—	—	-0.318**
Inflation	0.041	0.035	-0.026	-0.043	-0.027	-0.042
Trade Openness	0.478**	0.489**	-0.132*	-0.018	-0.134**	-0.019
Real Exchange Rate	-0.00007	-0.00005	0.0008**	0.0009**	0.0008**	0.0009**
Current Account/GDP	-0.235	-0.208	-0.127	0.009	-0.116	0.0007
Capital Account/GDP	-2.990	-3.859	-1.790	6.171	-2.640	6.718

**significant at 1% *significant at 5%

VII. RFI, Growth and Financial Development

Mean differentials and COV estimates for deposit and lending market rates of APEC member nations were found to have a positive relationship with the growth of Philippine GDP per capita, while convergence measures for the money market rates have insignificant effects (see Table 3). The models registered a modest adjusted R-squared of not greater than 50%. These results suggest that the convergence of deposit rates and lending rates among APEC members have a negative impact on economic growth. These findings support the notion of growth retardation with increased financial integration. More converged financial market rates in the region may actually induce capital outflows from capital scarce to capital abundant countries with better institutional systems, especially in regions where there are both developed and developing nations (Edison, et al., 2002).

- Table 4 shows regression runs relating RFI indicators with measures of financial development. The RFI indicators for lending and deposit markets were found to have insignificant

effects on financial development indicators, except for private credit. The negative coefficient suggests that convergence in lending and deposit rates have positive impacts on the level of private credit as a share of GDP in the Philippines. On the other hand, convergence in the values of money market rates among APEC member nations were found to have negative effects on all measures of financial development. All regression models registered an adjusted R-squared of 90% on average.

Table 3.Coefficient Estimates of Economic Growth and Regional Financial Integration

	Mean Differential of APEC Member Nations (Relative to the Philippines)			APEC Member Economies Coefficient of Variation (COV)		
Explanatory Variables	Dep. Market Rate	Lending Market Rate	Money Market Rate	Dep. Market Rate	Lending Market Rate	Money Market Rate
Constant	.076	.077	.077	.053	.060	.072
RFI Indicator	.0001*	.00004*	.00005	.014*	.014*	.005
Stock Activity	-.114	-.036	.047	-.386	-.422	-.093
Inflation	.399*	.404*	.422*	.338*	.293*	.428*
Government Balance	.185	.160	.115	.239*	.179	.107
Trade Openness	.016	.011	.005	.036	.046	.004
Dummy Variable for Year 1989	-.023	-.021	-.016	-.025	-.040*	-.015

*significant at 5%

Table 4. Coefficient Estimates of Financial Development Indicators and Regional Financial Integration

	Financial Development Indicator							
Explanatory Variables	Bank Deposit - to-GDP Ratio		Private Credit				Stock Market Activity	
Constant	-0.071	-0.101	-0.666	-0.686	-1.096	-1.260	0.015	0.015
DDRD (Deposit)	—	—	-0.001*	—	—	—	—	—
DLRD (Lending)	—	—	—	-.0005*	—	—	—	—
DMRD (Money Mkt)	0.005*	—	—	—	0.028*	—	0.0002*	—
CV - DMR (Money Mkt)	—	0.072*	—	—	—	0.380*	—	0.003*
Inflation	-1.218*	-1.131*	-1.063	-1.060	-1.410	-0.953	0.008	0.012
Trade Openness	1.644*	1.621*	2.993*	3.011*	3.235*	3.113*	-0.004	-0.005
Current Account/GDP	-0.005*	-0.005*	0.006*	0.006	0.011*	0.013*	-.00009	-.00008
Capital Account/GDP	0.027	0.024	-0.285	-0.283*	-0.173	-0.187*	-0.003*	-0.003*
Real Exchange Rate	0.232	0.204	-0.044	-0.050	0.068	-0.086	-0.016*	-0.017*
Dummy (1989)	0.160*	0.187*	-0.114	-0.114	-0.100	0.041	-0.007*	-0.006*

*significant at 5%

VIII. Summary and Conclusion

Over the recent decades, the Philippines has instituted liberalization policies in its financial markets which have resulted in a higher degree of financial integration with the rest of the world. The country has also joined different multilateral regional agreements such as the Asia Pacific Economic Cooperation (APEC).

Its membership has resulted in regional financial integration with member countries of these groups. Some studies state that financial integration leads to economic growth and financial development through increased capital flows and international risk sharing. However, some say that this will happen only if the country has stable financial institutions and policies; the absence of which could lead to massive capital outflows which could retard growth and financial development. Hence, this paper investigated the impacts of international and regional financial integration on Philippine economic growth and financial development.

The degree of international financial integration was measured through quantity-based measures; the accumulated stock of capital flows and inflows and the annual flow and inflow of capital from 1977 to 2007. Higher stocks of capital flows and inflows were found to have a positive impact on economic growth and stock market activity, but do not affect other financial development indicators. On the other hand, the annual flows and inflows of capital have positive effects on the deposit market, but have negative impacts on stock activity. With mixed results, the study is inconclusive with regards to the definite relationship between IFI, growth and financial development in the Philippines.

The study also investigated the impacts of increased regional financial integration of the Philippines with APEC member countries, the degree of which were measured through mean differentials and coefficient of variation estimates of the interest rates of various financial markets in each member country. These price-based measures reflect the law of one price; a greater degree of IFI is evident if the values of these indicators decrease or converge. However, the study found that convergence in lending and deposit market rates can retard economic growth, although these have positive impacts on the development of the private credit market. On the other hand, convergence in money market rates has negative impacts on the development of bank deposits and stock markets and has no significant impact on economic growth. However, with a number of regressions with insignificant coefficients for RFI indicators, this paper cannot provide a definitive conclusion on the relationship of RFI, growth and financial development.

These results are not new; a number of studies in the field of financial integration have the same inconclusive findings which could be attributed to many factors such as inter-country differences, data problems, or the imperfections of financial integration indicators. Further investigation on the matter is needed, and can be conducted through the use of other existing measures of financial integration. Only then can one uncover the true relationship between financial integration, economic growth and financial development.

While inconclusive, the findings suggest the need to look into existing policies and institutions related to financial integration in the country. The negative results from RFI indicators warrant the need for this exercise. On a positive note, the country should continue its efforts in increasing its capital stock through foreign investments. This could potentially promote growth and financial development in the Philippines.

References

Andersen, P., & Moreno, R. (2005). Financial Integration: An Overview. BIS Papers No. 23.

Asian Development Bank. (2006). Support for APEC Fiscal and Financial Initiatives Technical Assistance Report.

Austria, M. (2001).Liberalization and Regional Integration: The Philippines' Strategy to Global Competitiveness. PIDS Discussion Paper Series 2001-09.

Baele, L., et al. (2004). Measuring Financial Integration in the Euro Area. Germany. European Central Bank. ECB Occasional Paper Series No. 14.

Baldovino, H. (2008). The Impacts of International Financial Integration on Philippine Economic Growth. Unpublished Undergraduate Thesis. UPLB.

Bermudez, N. A. C. (2009). Regional Financial Integration of APEC and its Impacts on Philippine Financial Development and Economics Growth. Unpublished Undergraduate Thesis. UPLB.

Corbett, J. (2007). Building Integrated Financial Markets 10 Years After the Asian Crisis. Asian Development Bank.

Edison, H., et al. (2002). International Financial Integration and Economic Growth. IMF Working Paper, International Monetary Fund, Washington D.C.

Eichengreen, B., & Park, Y.C. (2004). Why has there been less financial integration in Asia than in Europe? MAS Staff Paper, Monetary Authority of Singapore**:** 1-21.

Inter American Development Bank. (2002) www.iadb.org/res/publications/pubfiles/pubB-2002E_7384.pdf

Ghosh, S. R. (2006). East Asian Finance: The Road to Robust Markets. Washington D.C., The International Bank for Reconstruction and Development/The World Bank**:** 1-217.

Kim, S., & Lee, J.W. (2008). Real and Financial Integration in East Asia. ADB Working Paper Series on Regional Economic Integration No.17.

Lane, P., & Milesi-Ferretti,G..M.(2000). The External Wealth of Nations: Measures of Foreign Assets and Liabilities for Industrial and Developing Countries. CEPR Discussion Paper, Center for Economic and Policy Research, London, UK.

Lee, J.W. (2008). Patterns and Determinants for Cross-border Financial Asset Holdings in East Asia. ADB Working Paper Series on Regional Economic Integration No. 13, Asian Development Bank, Manila, Philippines.

Onguglo, B., & Cernat, L. (2000). Development Issues Arising from Large Economic Spaces and Options for Developing Countries. A paper presented at the 2000 APEC Economic Outlook Symposium, 24-25 July 2000, Manila, Philippines.

Papademos, L. (2010).Financial integration, development and stability: Lessons from the crisis. Speech delivered at the conference "Financial integration and stability: the legacy of the crisis," sponsored and organized by the European Central Bank and the European Commission Frankfurt am Main, 12 April 2010.

Parreñas, J. C. (2007). "Financial Liberalization and Integration in East Asia: Challenges, Prospects and Cooperation Opportunities." ABA Journal XXII(2): 1-31.

Pasadilla, G.., & Milo, M. (2005). Effect of Liberalization in the Banking Sector. Asia-Europe Meeting Trust

Fund, Asian Institute of Management Policy Center. Foreign Investment Advisory Service, Philippine Institute of Development Studies and the World Bank.

Prasad, E, Rogoff, K., Wei, S.J., & Kose, M.A.. (2003). The effects of financial globalization on developing countries: some empirical evidence. IMF Occasional Paper 220, International Monetary Fund, Washington D.C.

Qin, D.,Cagas, M.A., Ducanes, G.., et al. (2007).Measuring Regional Market Integration in Developing Asia: A Dynamic Factor Error Correction Model (DF-ECM) Approach. Office of Regional Economic Integration. Asian Development Bank .Working Paper Series on Regional Economic Integration No. 8.

Tan III, J.A., & Paderanga, Jr., C. (1997). A Note on Philippine Financial Openness. University of the Philippines School of Economics. UPSE Discussion Paper No.97-04.

The Journal of Global Business and Trade

Journal of Global Business and Trade

Sustainability Factors Among Enterprises Utilizing a University-Developed Technology: The Case of Bio-N (Microbial-Based Fertilizer) Mixing Plants in Luzon, Philippines

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ARTICLE INFO

Keywords:
active mixing plant businesses,
biofertilizer,
entrepreneurial environment,
marketing strategies,
sustainability,
technology

ABSTRACT

The general objective of the study is to determine the factors which contribute to the sustainability of the active Bio-N mixing businesses utilizing a university-developed technology, a microbial-based fertilizer popularly known as Bio-N.

Three organizations operating active mixing plants under the UPLB Bio-N project - one cooperative (Gloria Community Multi-Purpose Cooperative), one local government unit (LGU) (Naujan-LGU), and one private enterprise (Romarc Enterprises) were covered in the study. These organizations and their mixing plants were based in Regions III (Central Luzon) and IV-B (MIMAROPA) in Luzon, Philippines. The case study method was employed to profile the organizations managing the mixing plant businesses and describe their marketing strategies and the entrepreneurial environment of these organizations.

The factors found to be common among the organizations operating active Bio-N mixing plant businesses were: a strong entrepreneurial environment, innovative marketing strategies, a wide distribution network, strategic alliances with other organizations, key people with strong technical and business management backgrounds, diversified products and continuous R & D. These factors contributed to the ability of the active mixing plants to sustain their operations even after the marketing linkage with the Department of Agriculture (DA) had ended.

It is recommended that an entrepreneurial culture be cultivated in organizations wanting to sustain and grow technology-based income-generating businesses.

I. Introduction

Today's modern agriculture is challenged by different issues confronting food sufficiency and food safety. The need to provide sufficient amounts of food for the rapidly growing population prompted the development of biofertilizers that would not only increase crop production but also ensure food safety and

environment protection. Biofertilizers promote growth of crops by harnessing elemental nutrients from the soil using strains of microorganisms. This bio-alternative has received significant attention in Asia Pacific Region countries like Japan, Taiwan, Korea and Thailand.

In the Philippines, the National Institute for Molecular Biology and Biotechnology in the University of the Philippines Los Baños (BIOTECH-UPLB) is the pioneering institution in the field of biotechnology. Through continuous research, the Institute has developed several kinds of biofertilizers. Bio-N was one of the biofertilizers developed by BIOTECH through the initiative and dedicated researches of Professor Emeritus Mercedes Umali-Garcia of BIOTECH-UPLB. It is a microbial inoculant containing strains of *Azospirillium* that increases nitrogen intake of crops.

Through the process of nitrogen fixation, Bio-N can supply at least 50% of the total nitrogen requirement of crops and thus can reduce the usage of nitrogen-based chemical fertilizers by up to half of the recommended fertilizer requirement. It has proven its ability to increase crop yield and resistance to diseases. Among the major crops that benefitted from this technology are rice, corn, sugarcane and vegetables (Rosales & Umali-Garcia, 2002).

Soil, charcoal and isolated bacteria are mixed together to produce Bio-N fertilizer. Processors pulverize, mix, and steam sterilize the solid carrier, the soil and the charcoal for three successive days, allowing the bacteria to grow in the medium. DL-malic acid, present in the medium, provides the needed carbon and essential salts to assure the growth of the isolated strains of bacteria (Evangelista, 2008).

The increase in demand for Bio-N, as reflected in the continuous increase in the number of users, walk-in buyers, product orders and positive feedback from different regions of the country strengthened the idea of providing a program that would make it available for local farmers in the entire country. However, the laboratory and production capacity of BIOTECH, the only producer of Bio-N during that time, was not sufficient to meet the escalating need for Bio-N. This constraint resulted in unmet demand, inefficient distribution of the product and difficulty in procurement, especially for farmers in remote areas.

In response to this development, the extensive commercialization of Bio-N was put into action in the year 2002 through the "National Program on the Production and Utilization of Bio-N for Sustainable Production of Agricultural Crops". The program was under the countrywide government initiative "Ginintuang Masaganang Ani (GMA) Corn Program". The program was executed through the joint efforts of BIOTECH-UPLB, the National Food Authority, the Technology and Livelihood Resource Center, the Department of Agriculture (DA) and other DA-attached agencies like the Bureau of Soils and Water Management (BSWM). The DA facilitated the overall management of a program.

By 2010, there were 68 Bio-N mixing facilities in the country composed of 24 cooperatives, 32 DA-LGUs, 3 state universities/colleges and 9 private enterprises. The first years of Bio-N mixing plants operation were reported to be successful. However, a significant number of Bio-N mixing businesses experienced business setbacks starting in the middle of the year 2008 when the subsidy given by the government was terminated. From only 10 idle mixing facilities at the start of the year 2008, the number of inactive mixing plants increased to 38 in 2010. The need to conduct the research study was thus prompted by the increasing number of inactive Bio-N mixing facilities in the country.

The general objective of the study is to determine the factors which contribute to the sustainability of the active Bio-N mixing businesses. Specifically, the paper aims to: 1) Provide an overview of the status of the Bio-N mixing plant businesses; 2) Describe the profile and marketing strategies of the organizations managing the selected active Bio-N mixing businesses; and 3)

Determine and analyze the factors which contributed to the sustainability of the active mixing plant businesses.

The study focused on marketing strategies as it is claimed to be even more critical for small to mid-sized enterprises (SMEs) for which the loss or gain of a single customer can often determine firm (or a business enterprise's) survival (Becherer, et al., 2008). The ability of an organization to initiate innovative marketing strategies, on the other hand, emanates from an entrepreneurial environment. As Kuratko (2007) cites in an editorial article, "continuous innovation (in terms of products, processes, technologies, administrative routines, and structures) and an ability to compete proactively in global markets are the key skills that will determine corporate (or organizational) performance in the twenty-first century… The challenge for leaders is to create an internal marketplace for ideas within their companies (or organizations), and encourage employees to act on these ideas."

Hopefully, the inactive businesses can apply the insights gained from the more successful mixing plants to revitalize their operations. Further, the research can also provide insights on the factors which can pave the way to successful technology-based income-generating projects, especially among non-private entities such as cooperatives and local government units (LGUs).

II. Methodology

The researchers utilized the case study method. The subjects of the case studies were the organizations managing selected active mixing plant businesses under the Bio-N Project. A mixing plant business was classified as active if it was continuously sourcing concentrate from BIOTECH-UPLB and actively producing Bio-N on a regular schedule (i.e., at least twice a year). Three organizations, a cooperative (Gloria Community Multi-Purpose Cooperative), a local government unit (LGU) (Naujan LGU), and a private enterprise (Romarc Enterprises) were covered in the study. The mixing plants of these organizations were located in Oriental Mindoro and Bulacan in Regions IV-B (MIMAROPA) and III (Central Luzon), Philippines. Key personnel like the manager, project head and in the case of the private enterprise, the owner of the firm, were interviewed to gather primary data on the profile, marketing strategies and entrepreneurial environment of the organizations. Secondary information on the status of the Bio-N mixing plants was also gathered form BIOTECH-UPLB.

III. Results and Discussion

Current Status of the Bio-N Project

The Bio-N Project, since its inception in 2002, has granted 59 Bio-N mixing plants to 59 beneficiaries. It is composed of 24 cooperatives, 32 DA-LGUs and 3 SUCs. There was, however, as of the end of 2010, a total 68 Bio-N mixing plants all over the country as there were nine private companies which acquired a direct license to produce the product from BIOTECH-UPLB.

The Bio-N project beneficiaries received grants from DA in the form of mixing facilities. However, other expenses like land, building, manpower and other incidental expenses were shouldered by the receiving organization or enterprise. Each recipient provided at least 100 square meters of land and constructed a building which would serve as the laboratory and production facility of Bio-N. In return for the grant, recipients were bound to produce high- quality and affordable Bio-N fertilizer and make it available for local famers within the service area. Grantees were also required to launch a demonstration farm to show the benefits of using Bio-N, both in terms of productivity and income.

As for the private companies which acquired a direct license to produce the product from BIOTECH, the university provides the following support to the company: 1) the Bio-N concentrate supply; 2) technical assistance during the initial six (6) months of production and marketing of BIO-N; and 3) monitoring the quality & quantity of the products distributed. The obligations of the licensee, on the other hand, is to,

among others: 1) pay the license fee; 2) establish within 6 months from the date of the license agreement a manufacturing plant for the production of BIO-N using the licensed technology; and 3) purchase a minimum amount of concentrates and produce a minimum volume of regular BIO-N per year.

In recent years, there has been an increasing number of non-operational mixing plants in the country. Cooperatives under the program posted the lowest survival rate (30%). On the other hand, private enterprises (direct licensees of BIOTECH) had the highest rate of survival at 56% (Table 1).

Table 1. Survival Rates of Bio-N Mixing Plants Based on the Type of Business or Organization

Type of Business/Organization	Active	Inactive	Total	Survival Rate
Cooperative	7	16	23	30%
Local Government Unit	16	17	33	48%
State University/College	1	2	3	33%
Private Enterprise	5	4	9	56%
Total	**29**	**39**	**68**	**43%**

Source: BIOTECH-UPLB, 2010

According to BIOTECH-UPLB, difficulties encountered in marketing the product were the primary reason behind the inactivity of the mixing plants. The inactive plants had strongly relied on the orders coming from the DA and they did not anticipate that the program would be terminated. Furthermore, there were misconceptions regarding the agreement with the DA and the Bio-N mixing plants. The managers of the mixing plants had presumed that promotional activities were the primary task of the DA. In addition, the initiatives of the DA in encouraging production and adoption of Bio-N were counteracted by the free distribution of competitor fertilizers like Vital-N and BioSpark Trichoderma.

Table 2 presents the sales generated by the institute from the year 2005 to 2010. Sales peaked in the years 2006 to 2008. This could be attributed to the DA's buying of the output of the mixing plants and providing the Bio-N for free. On the other hand, sales decreased in the year 2009 to 2010 to 23.2% and 19.7%, respective of the sales in 2008. From mid-2008 onwards, the DA started the termination of marketing tie-ins with Bio-N mixing plants. Since the majority of the volume of Bio-N produced by mixing plants was absorbed by the DA, the termination of the subsidy resulted in a decrease in volume of production. The consequence of this development is reflected in the 60% decrease in annual sales of Bio-N concentrate orders received by BIOTECH-UPLB from 2008 to 2010 or from Php 6,581,600 to Php 2,696,998.

Table 2. Sales of Bio-N Generated by UPLB-BIOTECH from 2005 to 2010

Year	Bio-N	Concentrates	Total
2005	473,550.00	673,951.82	1,147,501.82
2006	5,923,730.00	1,808,254.00	7,731,984.00
2007	8,877,520.00	4,857,013.00	13,734,533.00
2008	7,781,640.00	6,581,600.00	14,363,240.00
2009	246,662.20	3,080,990.79	3,327,652.99
2010	132,892.20	2,696,998.22	2,829,890.42
Total	23,435,994.40	19,698,807.83	43,134,802.23

Source: BIOTECH-UPLB, 2010

Profile of the Organizations with Sustained Bio-N Mixing Businesses

Gloria Community Multi-Purpose Cooperative

The Gloria Community Multipurpose Cooperative (Gloria CMPC) is located in Barangay Maligaya, Gloria, Oriental Mindoro. It was founded in October 29, 1994 and was registered with the Cooperative Development Authority (CDA) the same year. The primary mission of the cooperative is to provide products, services and support that would uplift the livelihood of its members. As of the end of 2010, the cooperative had 468 members, 268 of whom are active and the remaining 200 inactive.

As of now, Gloria CMPC considers itself the number one multipurpose cooperative in western Mindoro, providing financial, agricultural, technical and infrastructural support to its members. The cooperative offers several products and services for members and non-members. Gloria CMPC is making available production lending and micro-lending to members. They are also engaged in palay and rice trading; Bio-N production; pop rice processing; and soap, detergent, cologne and dishwashing manufacturing. The cooperative has a retailing outlet near the main office and production facility. They sell agricultural supplies like biofertilizers (Bio-N, Amway and Durabloom), NFA rice, pesticides, feeds and other agricultural and veterinary supplies.

The cooperative became part of the Bio-N program in 2006. A part of the main office was converted into a laboratory while a fraction of the warehouse was converted into a production facility to accommodate the requirements of the mixing plant. The only cost incurred during the initial stage of production was manpower and other incidental expenses. The capital was sourced from the existing funds of the cooperative which were generated by the coop's other business units. The cooperative continues to produce Bio-N up to now despite several challenges faced in marketing the product.

Mr. Medardo Mornaol is the incumbent manager of Gloria CMPC. He was 52 years old then and is a graduate with a B.S. in Agriculture, specifically a major in Agronomy. Mr. Mornaol was already the manager since the onset of the transfer of the Bio-N technology. He was trained by BIOTECH on the process of fertilizer inoculation and carrier preparation. He was the only person in the cooperative knowledgeable in the preparation of Bio-N. As of the time of the study, Mr. Mornaol, aside from being the coop manager, was also a barangay secretary and a full-pledged farmer.

Naujan LGU

The chief proponent and advocate of Bio-N production in the municipality of Naujan, Oriental Mindoro was Mr. Ely Vargas, the municipal agricultural officer (MAO) of the municipality. He was an avid enthusiast of organic farming and green environment. He was an active member of the

environmental organization Greenpeace. Mr. Vargas was the one who collaborated with the regional office of the DA in Oriental Mindoro in requesting a Bio-N mixing facility. Through the persistent efforts of the municipality and the province, the program successfully awarded a facility to Naujan in the year 2005. The municipality allocated Php 750,000 while the provincial office allocated Php 400,000, for the construction of building and facility needed for Bio-N production.

The primary objective of the municipality was to promote organic farming in Naujan and provide alternative inputs to chemical fertilizer. The municipality provided Bio-N at subsidized prices to support marginalized farmers. As of the time of the study, the mixing plant of Naujan was still actively producing Bio-N. Despite several challenges faced by the project, Mr. Vargas aimed to have Bio-N available to farmers, at least in the municipality of Naujan.

Romarc Enterprises

Romarc Enterprises is a private agribusiness company owned by Mr. Fernando C. Castillo and Ms. Encarnacion Castillo. The name of the company came from the names of the owner's two children, Roma and Marc, and "c" also stands for Castillo. The humble beginnings of the company can be traced back to the year 1976, when Mr. Castillo decided to venture into swine production. However, after almost 20 years of operation, they decided to close the piggery due to the lack of a successor for the business. Being a keen enthusiast of organic products and practices, Mr. Castillo decided to venture into organic fertilizer production and formally named their business as Romarc.

The first product of the business was Yama Organic fertilizer. It was a mixture of chicken manure and "*bagas*". *Bagas* is composed of soil from dried fishponds and stalks of sugarcane. In 2007, Mr. Castillo decided to venture into Bio-N production. The decision of Mr. Castillo to engage in Bio-N production was driven by the interest and demand of his current Yama customers for Bio-N. Their customers started to look for a manufacturer of Bio-N when they learned that inorganic fertilizer application was not sufficient to nourish crops, especially rice and corn. Mr. Castillo then decided to acquire a license to produce and distribute the product. Romarc acquired a non-exclusive license from BIOTECH-UPLB to use the Bio-N technology. They paid Php 100,000 for the transfer and commercialization of the technology. In addition, they also paid royalty taxes for the first two years of operation on quarterly basis at the rate of 2 percent of gross sales. Currently, the company is paying royalty tax at a rate of three percent based on the agreement made by the company with BIOTECH-UPLB. Though not a direct recipient of the Bio-N Program of DA, BIOTECH considers Romarc as part of the program due the latter's involvement in the production and distribution of Bio-N through DA. Romarc participated in the bidding conducted by DA and supplies the latter with Bio-N which are then distributed to farmers.

As of now, Romarc is also producing organic rice and organic mushrooms. They are also in the midst of introducing their newly-developed organic foliar fertilizer into the industry, which they will launch on the market as Compost Tea.

Description of the Marketing Strategies of the Active Bio-N Businesses

Gloria Community Multi-Purpose Cooperative

Gloria CMPC started selling Bio-N in the year 2006. During the initial stage of production, their lone market was the Department of Agriculture. The cooperative supplied the demand for Bio-N of the entire region of Oriental Mindoro. The products acquired by the DA were distributed to local farmers in different areas like Romblon, Marinduque and nearby municipalities like Roxas and Pinamalayan. However, the DA stopped sourcing Bio-N fertilizer from the cooperative since 2009.

The cooperative then started looking for stable markets other than the DA. Presently, the customers of Gloria CMPC for Bio-N are the members of the cooperative, rice and corn farmers, vegetable growers (e.g., okra, talong, kamatis and ampalaya) and fertilizer dealers. They only distribute Bio-N in the municipalities of Gloria, where the mixing plant is located, and in Roxas, where the cooperative's fertilizer dealers were located. The peak sales months were April and October. Since the end of the marketing linkage with the DA, the sales of the cooperative drastically decreased to only 500 packs of Bio-N per production from a former high of as much as 40,000 packs per planting season.

Gloria CMPC distributes its products through its store outlet. Members and non-members regularly drop by the store to purchase Bio-N. Payment for the product was on both a cash and credit basis, depending on the agreement of the cooperative and customer. In the case of its fertilizer dealers, the cooperative provided bulk discounts and only sold the product for 50 pesos per pack.

The cooperative promoted the product through word-of-mouth, product sampling, field demonstration, participation in trade fairs, exhibits and seminars. During the tie-in of the cooperative with the DA, they only exerted minimal effort in promotions. When the collaboration with the DA ceased however, Gloria CMPC strengthened its marketing effort through radio advertisements. The product advertisement was broadcast every day for one whole week and sometimes the cooperative's manager was invited to the radio station to talk about the advantages of using Bio-N. The radio advertisements had to be stopped, though, due to the high cost of radio broadcasting.

Naujan LGU

The current market for Bio-N of Naujan LGU is composed of rice, corn, vegetable (e.g., tomatoes, bitter gourd, etc.) and ornamental producers. A majority of the fertilizer is consumed by the rice farmers and a portion goes to other biofertilizer users. According to Mr. Vargas, almost 50% of the rice farmers in Naujan are actively using Bio-N in rice production. During the onset of the GMA Corn Program, the LGU used to supply the demand of nearby provinces like Romblon and Marinduque. However, their production of Bio-N also decreased upon the termination of the program. As of now, they are only supplying the need of the Naujan municipality.

They distribute the product by making deliveries and through their store outlet in the Bio-N mixing plant. Before, Naujan LGU allowed Bio-N to be purchased on credit. However, they experienced difficulty in recovering receivables, and since then, the mode of payment implemented has been on a cash basis only.

To counter the challenge of convincing farmers to use new technologies, the Naujan LGU engaged in intensive product promotion through word-of-mouth, field trials and extensive seminars. Moreover, they also integrated the promotion of the product with other projects of the municipality like organic farming and rice seed distribution. Bio-N was packed together with rice seedlings that are purchased by local farmers during the start of cropping season. Whenever farmers buy seedlings, they also got to purchase Bio-N. The local government provided a 50% subsidy to the total cost of the package.

The Naujan LGU also participated in agricultural trade fairs in the province. It gave away product samples to encourage non-users of Bio-N to try the product.

Romarc Enterprises

The current market for Bio-N of Romarc is the DA and individual farmers. Up to now, Romarc has actively participated in bidding conducted by the regional office of the DA. Aside from the DA, the company also markets to corn, rice and vegetable farmers coming from Bulacan and other regions in Luzon. They have point-of-sale (POS) individuals, those affiliated with the company as well as contact persons in LGUs, to gather orders for them.

As of now, the company distributes Bio-N in Baguio, Ilocos Sur, Pangasinan, Bicol and Tarlac. However, their current focus is to fully penetrate the market in the province of Bulacan. Romarc employed several marketing tools to successfully capture a significant market share. During the start of production, they gave free samples of Bio-N to every barangay of Pulilan town. The number of packs given to farmers depended on the size of the land that they were currently cultivating. For example, if a farmer had 2 hectares of land, Romarc gave away 12 packs of Bio-N since the recommended rate was 6 packs per hectare of land. The company decided to employ this kind of strategy to allow the farmers to try the product and see for themselves the advantages of using Bio-N. Aside from this, they also converted three hectares of land along the highway to what they call a "show farm". It houses planting materials as well as vegetables and fruits. They established the farm so that farmers and even ordinary residents could see the benefits of using biofertilizer.

Unlike other Bio-N producers, Romarc adopted a different pricing scheme. If the selling price of other mixing plants was Php 60/pack, Romarc sold Bio-N for Php 80/pack. Romarc's product's edge was that instead of its Bio-N having the usual 6-month expiration, it had an 8- month life span.

In terms of its payment arrangements with customers, Romarc allowed different payment schemes depending on location and trustworthiness of customers. Clients from distant locations were compelled to settle payment upon placement of the order. On the other hand, regular patrons were given a more flexible payment system. Romarc allowed a 30-day credit limit, but were also willing to extend it depending on the agreement between both parties.

Romarc also conducted training and seminars through alliances with other companies engaged in the production of organic inputs like Harbest Agribusiness Corporation. They provided training on the proper application of fertilizer as well as good farming practices so that farmers could attain the maximum potential of production. Moreover, the company also provided technical assistance to farmers who expressed interest in applying Bio-N to other crops apart from rice, corn and vegetables. They sent farm technicians to the farm to assist the farmers in testing the efficacy of the product on other crops.

Description of the Entrepreneurial Environment of the Active Bio-N Mixing Plant Businesses

For organizations to encourage the development of an entrepreneurial environment, management must nurture an entrepreneurial culture. Hornsby, et al. (1999) identified the following three significant dimensions that lead to the shaping of an internal entrepreneurial environment. These factors are: 1) management support; 2) rewards and reinforcement; and 3) time availability. Management support can be in the form of encouraging innovative ideas, providing resources and enhancing capabilities and integrating entrepreneurial activities to the overall business operation. On the other hand, an effective reward system increases the willingness of the employees, especially the managers, to take the risks associated with venturing into entrepreneurial activities. Employees develop their own sense of responsibility and became cognizant of the impact of their decision and performance on the condition of the business. Lastly, in relation to time availability, employees could become innovative given sufficient time to think of new ideas and to dwell on new possibilities. This set-up encourages risk-taking behavior and experimentation.

In relation to management support, Gloria CMPC provided seminars and training for members to enhance their entrepreneurial skills. Topics covered ranged from entrepreneurship to production of products like pop rice, soap and detergents. These capability-building activities strengthened the members' skills and developed confidence in them to engage in entrepreneurial activities. On the other hand, the Naujan LGU

encouraged entrepreneurial activities within its functional units to augment the budget deficit and to finance its social services.

In relation to two other factors, rewards and time availability, Romarc Enterprises had an attractive compensation system. It included a competitive salary and additional incentives in the form of sales commissions. The owner encouraged the employees to be involved in marketing the company's product by giving them a 10 percent commission for every product order that they could close with customers. This scheme allowed the employees to also engage in entrepreneurial activities while also working for the company. On the other hand, Gloria CMPC also gave members a sales commission for every product that they were able to sell on the market. Members sold Bio-N for Php 60 pesos per 200-gram pack but the cooperative provided them the product for only Php 50. Thus, they had a Php 10 margin for every unit sold.

Key Factors for Competitive Success

Based on the assessment of the marketing strategies and the entrepreneurial environment of the organizations managing the active Bio-N mixing plants, the key factors for competitive success were identified. Table 3 summarizes the key success factors of the active mixing plants.

The factors which were found to contribute to the sustainability of the active Bio-N mixing plant businesses were: a strong entrepreneurial environment (Gloria CMPC, Naujan LGU and Romarc); innovative marketing strategies (e.g., development of new markets and product bundling) (Gloria CMPC, Naujan LGU and Romarc); wide distribution network (Romarc Enterprise and Gloria CMPC); strategic alliances with other organizations (Romarc); key people with technical and business management background (Gloria CMPC, Naujan LGU and Romarc); having diversified but complementary/ related products (i.e., certified seeds) (Gloria CMPC, Naujan LGU and Romarc) and continuous engagement in R & D (Romarc).

Table 3. Key Success Factors of Active Mixing Plants

Bio-N Mixing Plant	Key Competitive Success Factors
Gloria CMPC	➢ Strong entrepreneurial environment • provided seminars and trainings for members to enhance their entrepreneurial skills • members encouraged to sell the product by giving them commission ➢ Innovative marketing strategies • employed radio advertisement • developed new markets - vegetable growers and fertilizer dealers ➢ Strong network of retailers/sales agents • established retailers in other municipalities outside of Gloria, Mindoro ➢ Has existing resources tapped for the business ➢ Key people with strong technical and business management background ➢ Diversified products
	➢ Strong entrepreneurial environment • strong support from the LGU and project management • strong advocate of the project in the person of the MAO • LGU officials encouraged entrepreneurial activities within its functional units • LGU provided 50% subsidy to the total cost of the product bundle

Naujan LGU	➢ Innovative marketing strategies • bundled Bio-N together with rice seedlings and selling at subsidized prices for higher value addition • developed new markets – vegetable and ornamental growers ➢ Key people/ supporters with strong technical and business management background ➢ Diversified and complementary products (i.e., certified rice seeds/ seedlings)
Romarc	➢ Strong entrepreneurial environment • encouraged employees to sell the product by giving them commission ➢ Strong network of retailers/sales agents • utilized salesforce and point-of-sale (POS) contact persons in LGUs ➢ Innovative marketing strategies • technical support to clients, product samples & show farm ➢ Strategic alliance with other companies • tie-ins with companies like Harbest and other government units ➢ Key people with strong technical and business management background ➢ Diversified products ➢ Continuous engagement in R & D

IV. Summary of Results, Conclusions and Recommendations

The general objective of the study was to determine the factors which contribute to the sustainability of the active Bio-N mixing businesses utilizing a university-developed technology, a microbial-based fertilizer popularly known as Bio-N.

The selected active mixing plants were observed to exert innovative strategies in promoting Bio-N. They conducted radio advertisements, value addition (i.e., bundling of Bio-N with certified rice seedlings) and the provision of technical support to customers.

The factors which were found to contribute to the sustainability of the active Bio-N mixing plant businesses were: a strong entrepreneurial environment; innovative marketing strategies; a wide distribution network; strategic alliances with other organizations; key people with technical and business management background; having diversified but complementary/ related products; and continuous engagement in R & D. These factors contributed to the ability of the active mixing plants to sustain their operations even without the DA marketing link.

In conclusion, the organizations which managed the sustained Bio-N mixing businesses had one commonality: they were able to initiate innovative marketing strategies which can largely be attributed to the entrepreneurial environment existing within these organizations.

In general, the organizations operating inactive Bio-N mixing businesses can still revive their production operations. Several opportunities in the external environment (e.g., presence of untapped markets and increasing awareness of the advantages organic farming and products) can be tapped by the organizations. However, a change in mindset is needed to achieve this endeavor. An entrepreneurial culture must be cultivated in these organizations. The Department of Agriculture, BIOTECH-UPLB and other public and private entities can help in this aspect. Social preparation activities must be undertaken and mechanisms and practices which

will support the development of an entrepreneurial environment within these organizations must be put in place. This will pave the way to viable and sustained Bio-N mixing as well as other technology-based income-generating businesses, despite challenges in the external environment.

References

Becherer, R. C., Haynes, P. J., & Helms, M. M. (2008). An exploratory investigation of entrepreneurial marketing in SMES: The influence of the owner/operator. *Journal of Business and Entrepreneurship.* http://findarticles.com/p/articles/mi_qa5424/is_200810/ai_n31109427/

Evangelista, A. O. (2008). Business Plant for BIO-N Fertilizer Concentrate Production Plant in the UPLB Science and Technology Park. unpublished B.S. in Agribusiness Management (BSABM) undergraduate special problem. College of Economics and Management, University of the Philippines Los Baños, College, Laguna, Philippines.

Hornsby, J. S., Kuratko, D. F., & Zahra S.A. (2002). Middle managers' perception of the internal environment of corporate entrepreneurship: assessing a measurement scale. *Journal of Business Venturing, 17 (3),* 253-273.

Kuratko, D.F. (2007). Entrepreneurial leadership in the 21st century: Guest editor's perspective. *Journal of Leadership & Organizational Studies, 13 (4),* 1-11.

Rosales, C. M., & Umali-Garcia, M. (2002). The Development of Non-Symbiotic Nitrogen-Fixing Inoculants for Rice production in the Philippines: A Country Report, Paper presented in the 2003 FNCA Joint Workshop on Mutation Breeding and Biofertilizer, August 20 - 23, Beijing, China.

The Journal of Global Business and Trade

Journal of Global Business and Trade

Estimating the Effect of Remittances on Growth Using a Sample of Major Recipient Countries in Asia

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ARTICLE INFO

Keywords:
control variables,
economic growth,
remittances

ABSTRACT

This study estimates the effect of remittances on economic growth using a simple pooled regression analysis of 14 major remittance recipient countries in Asia for the period of 1975–2009. Exogenous control variables are also used which include indicators for government spending, investment, human capital, inflation, openness, and population growth. The results show that remittances have a statistically significant and positive impact on growth. The results indicate that a 1% increase in the share of remittances to GDP is associated with a 0.1-0.6% increase in real per capita GDP growth.

I. Introduction

Remittances provide a major source of external finance for many developing countries, and figures point to a rapidly increasing trend. Over the past decades, workers' remittances have grown to become one of the largest sources of financial flows to developing countries, often dwarfing other widely-studied sources such as private capital and official aid flows (Barajas, et al., 2009). In the last 10 years, remittance flows amounted on average to about one third of export earnings, more than twice that of private capital flows, almost 10 times official capital flows, and more than 12 times official transfers. Remittances have recently become as large as foreign direct investment (FDI) flows to developing countries.

Asia has been at the center of the increase in remittance flows. Official estimates of remittances to Asian developing countries show a rapid increase from about $9 billion in 1988 to about $169 billion in 2008 (Jha, Sugiyarto and Vargas-Silva 2010). In 2010, four of the top ten recipients of remittances were in Asia, including India, China, the Philippines, and Bangladesh (World Bank, 2011). Jha, Sugiyarto and Vargas-Silva (2010) note some reasons for this increase in remittance flows. One is that migration flows have remained consistently high as many developing country nationals find work abroad. Another reason is the increased use of official channels in sending money to their home countries, and central banks' increased ability to record these flows, which were previously given little attention

from expected low remittance flows, as remittances were previously considered to be sent only for special occasions or emergencies.

Given the increasing importance of remittances, in recent years there has been growing literature on the study of the relationship between remittances and growth. Some claim, however, that the topic has been inadequately studied, as conventional wisdom points out that since remittances are used mostly for consumption, they have a minimal impact on long-term growth (Giuliano and Ruiz-Arranz, 2009). This study attempts to contribute to the debate by estimating the effect of remittances on growth using a sample of 14 major remittance recipients in Asia. This study is useful in that it estimates the relationship for major recipient Asian countries as a sample and includes more recent years in the data, or simply provides an additional test of the relationship between remittances and growth.

II. Review of Selected Literature

Various studies have provided evidence on the positive impact or the lack thereof of remittances on growth using different models and samples of countries. Vargas-Silva, Jha, and Sugiyarto (2009), for instance, study the relationship for Asian countries including the impact of remittances on poverty. Using data for more than 20 countries in the region for 1988–2007, their results show that remittances positively affect home country real gross domestic product (GDP) per capita growth, with a negligible effect on poverty. A 10% increase in remittances as a share of GDP leads to a 0.9–1.2% increase in GDP growth. Jongwanich (2007), however, had different findings. The author also studied the impact of workers' remittances on growth and poverty reduction in developing Asia-Pacific countries using panel data for 1993-2003. The results indicate that while remittances have a significant impact on poverty reduction through increasing income, smoothing consumption and easing capital constraints of the poor, they have only a marginal impact on growth operating through domestic investment and human capital development.

Giuliano and Ruiz-Arranz (2009) estimated the relationship using a sample of 100 developing countries. Their study finds that remittances contribute to growth, and the channel is through providing an alternative way to finance investment and helping overcome liquidity constraints in countries with less developed financial systems. Their study considers the role of the financial sector, and provides evidence that there could be an investment channel through which remittances can promote growth, especially when the financial sector does not meet the credit needs of the population. Mundaca (2009) finds a similar result in the case of countries in Latin America and the Caribbean. Among other things, the author finds that remittances can have significant positive long-run effects on growth. After considering the effect of long-run investment and demographic variables, and controlling for fixed time and country effects, the study indicates that financial intermediation tends to increase the responsiveness of growth to remittances. The overall conclusion is that making financial services more generally available should lead to an even better use of remittances, thus boosting growth in these countries.

Fayissa and Nsiah (2010) also note a similar finding using a sample of 36 African countries from 1980–2004. Using a conventional neoclassical growth model, the authors found that remittances positively impact economic growth by providing an alternative way to finance investment and helping to overcome liquidity constraints. Mohamed and Sidiropoulos (2010) also used a standard growth model using data from 7 MENA countries (North Africa and Middle East) for 1975–2006. Using fixed-effects and random effects models, the authors find that remittances have a positive impact on growth both directly and indirectly through their interactions with financial and institutional channels. In addition, the results show the support of the fixed-effects method as the random effects model is rejected in statistical tests.

Pradhan, et al. (2008) examined the effect of workers' remittances on economic growth in a sample of 39 developing countries using panel data from 1980–2004. Their results show that remittances have a positive impact on growth. The authors note that since official estimates of remittances used in their analysis tend to understate actual numbers considerably, more accurate data on remittances is likely to reveal an even more pronounced effect of remittances on growth. Ziesemer (2009) estimates the remittance-growth relationship through the physical and human capital channels. The author estimates an open economy model of these two channels using the general method of moments with heteroscedasticity and autocorrelation correction with pooled data for four different samples of countries receiving remittances in 2003. The author finds that countries with per capita income below $1200 benefit most from remittances in the long run because they have the largest impact of remittances on savings. Their changes in remittances account for about 2% of the steady-state level of GDP per capita when compared to the counterfactual of having no changes of remittances. As savings react much more strongly than investment, an important benefit of remittances is that less debt is incurred and less debt service is paid than without remittances. All effects are much weaker for the richer countries.

Ruiz, Shukralla, and Vargas-Silva (2008) estimate the remittance-growth link by proposing the use of a semi-parametric model to avoid the risk of misspecification bias from imposing an arbitrary functional form. Their study finds evidence of a positive relationship between remittances and growth in parametric estimations, but such a relationship disappears when nonlinearity is taken into account using non-parametric techniques.

III. Model and Data

We estimate the effect of remittances on economic growth using the Ordinary Least Squares (OLS) method. We use a simple model that relates per capita GDP growth to remittances and some controlling variables as used by Giuliano and Ruiz-Arranz (2009) as specified below:

$$GDP_{it} = \beta_0 + \beta_1 Rem + \beta_2 X_{it} + e_{it}$$

where *GDP* is real per capita GDP growth, *Rem* is the ratio of remittances to GDP, and *X* is a set of other control exogenous variables that may also explain growth. These include inflation, measured as the annual percentage change in the CPI; openness to international trade, which is the ratio of the sum of exports plus imports of goods to total output; human capital, measured as the average number of years of secondary schooling; government fiscal balance, defined as the ratio of central government fiscal balance to GDP; investment ratio, which is the ratio of gross fixed capital formation to GDP; and population growth.

We estimate this relationship using panel data from 1975–2009 from a sample of 14 major recipient countries in Asia. These include Azerbaijan, Bangladesh, China, India, Indonesia, Korea, Malaysia, Nepal, Pakistan, the Philippines, Sri Lanka, Tajikistan, Thailand, and Vietnam. These countries have shown rapid increases in remittances flows and are the top 14 remittance-receiving countries in Asia in the last decade from 1999–2008 (Jha, Sugiyarto and Vargas-Silva, 2010). All data were taken from the World Bank's World Development Indicators online database.

IV. Estimation Results

Table 1 shows alternative specifications of the regression equation. The results show that there is a consistently positive effect of remittances on economic growth, with statistically significant results. The remittance variable is statistically significant at the 5% level. The results indicate that a 1% increase in the share of remittances to GDP is associated with a 0.1% increase in the per capita GDP growth rate. Most

controlling variables also show statistically significant results with the correct sign. Investment and capital, for instance, are positively related to growth, while inflation has a negative impact on growth. Interestingly, the population variable is negatively related to growth. Model 4 shows the best fit when insignificant variables are removed. The overall fit of the models are statistically significant at the 1% level as shown by the F statistic, and show an adjusted R^2 of about 25% which is consistent with other findings.

Table 1. Regression Results (Real per capita GDP as dependent variable)

Independent Variables	Model 1	Model 2	Model 3	Model 4
Remittances/GDP	0.1 (2.06)**	0.09 (2.05)**	0.1 (2.05)**	0.09 (2.03)**
Govt. Exp./GDP	-0.033 (-0.35)		-0.036 (-0.39)	
GFCF/GDP	0.21 (4.52)*	0.20 (4.52)*	0.20 (4.48)*	0.20 (4.47)**
Inflation rate	-0.043 (-4.20)*	-0.043 (-4.23)*	-0.043 (-4.20)*	-0.043 (-4.22)
Population growth	-1.22 (-2.27)**	-1.19 (-2.24)**	-1.21 (-2.24)**	-1.17 (-2.21)*
Secondary education, years	0.68 (2.16)**	0.69 (2.20)**	0.69 (2.18)**	0.70 (2.22)**
Trade/GDP	-0.004 (-0.66)	-0.004 (-0.68)		
Constant	-2.84 (-0.96)	-3.22 (-1.18)	-3.10 (-1.06)	-3.53 (-1.31)
No. of observations	207	207	207	207
Adjusted R^2	0.25	0.25	0.25	0.27
F-statistic	10.61*	12.41*	12.34*	14.84*

*significant at 1%, **at 5%
Note: t-values are in parentheses.
Source: World Bank, World Development Indicators online database

Natural logs of variables were also attempted with varying results. Using the natural logs of controlling variables yielded similar results. In addition, using the natural log of remittances still yielded positive and significant results, with a higher impact on growth. In this case a 1% increase in remittances leads to a 0.6% increase in real per capita GDP growth. The remittances variable is also statistically significant at the 1% level. The overall fit is, however, lower with an average adjusted R2 of about 20%, though still statistically significant at the 1% level as shown by the F-statistic. The results were superior when the inflation variable was not expressed in log terms. As above, Model 4 shows the best fit when insignificant variables are removed. These results are shown in Table 2.

Table 2. Regression Results, Semi-Log Case (Real per capita GDP as dependent variable)

Independent Variables	Model 1	Model 2	Model 3	Model 4
(Log)Remittances/GDP	0.61 (2.74)*	0.57 (2.61)*	0.61 (2.76)*	0.57 (2.63)*
(Log)Govt. Exp./GDP	0.96 (0.95)		0.95 (0.96)	
(Log)GFCF/GDP	4.48 (3.92)*	4.46 (3.90)*	4.48 (3.96)*	4.46 (3.94)*
Inflation rate	-0.04 (-3.78)	-0.04 (-3.79)*	-0.04 (-3.80)*	-0.04 (-3.80)*
(Log)Population growth	-1.22 (-1.76)***	-1.37 (-2.01)**	-1.21 (-1.79)***	-1.37 (-2.08)**
(Log)Secondary education, years	3.88 (2.06)**	3.74 (1.99)**	3.89 (2.09)**	3.73 (2.01)**
(Log)Trade/GDP	-0.03 (-0.06)	0.016 (0.03)		
Constant	-18.90 (-3.20)*	-16.45 (-3.09)*	-19.02 (-3.42)	-16.38 (-3.39)*
No. of observations	207	207	207	207
Adjusted R2	0.21	0.21	0.21	0.23
F-statistic	8.74*	10.04*	10.24*	12.11*

*significant at 1%, **at 5%, ***at 10%
Note: t-values are in parentheses.
Source: World Bank, World Development Indicators online database

However, using the natural logs of both real per capita GDP growth and remittances-to-GDP ratio yielded insignificant results. A better fit was obtained using non-logarithmic or semi-logarithmic specifications of the regression equation as shown in Tables 1 and 2.

V. Conclusion

This paper has made a modest attempt in estimating the effect of remittances on growth using a sample of 14 of the major recipient countries in Asia over the period 1975–2009. The results show that remittances have a positive and statistically significant effect on real per capita GDP growth. The chosen exogenous control variables also appear to work well in the model, as the number of insignificant variables is quite low. The results suggest that exporting labor can have a net positive effect on developing economies' growth as remittances are sent from workers abroad. The results may also imply that remittances may have multiplier effects in the economy through consumption, or that growth effects may arise from the investment channel. These links were not considered in this study, and can perhaps be useful for future analysis.

References

Barajas, A., et al. (2009). Do Workers' Remittances Promote Economic Growth? IMF Working Paper No. 09/153, Washington, DC: International Monetary Fund.

Catrinescu, N. et al. (2006). Remittances, Institutions and Economic Growth. Discussion Paper no. 2139, Bonn: Institute for the Study of Labor (IZA).

Fayissa, B. & C. Nsiah. (2010). "The Impact of Remittances on Economic Growth and

Development in Africa." *The American Economist*, 55(2), 92–103.

Giuliano, P., & Ruiz-Arranz, M. (2009). "Remittances, Financial Development, and Growth." *Journal of Development Economics*, 90, 144–152.

Jha, S., Sugiyarto, G., & Vargas-Silva, C. (2010). "The Global Crisis and the Impact on Remittances to Developing Asia." *Global Economic Review*, 39(1), 59–82.

Jongwanich, J. (2007). Workers' Remittances, Economic Growth and Poverty in Developing Asia and the Pacific Countries, Working Paper no. 07/01, Bangkok: UNESCAP.

Mohamed, S.E., & Sidiropoulos, M.G. (2010). "Does Workers' Remittances Affect Growth: Evidence from Seven MENA Labor Exporting Countries." *International Research Journal of Finance and Economics*, 46,181–194.

Mundaca, B.G. (2009). "Remittances, Financial Market Development, and Economic Growth: The Case of Latin America and the Caribbean." *Review of Development Economics*, 13(2), 288–303.

Pradhan, G., et al. (2008). "Remittances and Economic Growth in Developing Countries." *The European Journal of Development Research*, 20(3), 497–506.

Ruiz, I., Shukralla, E. & Vargas-Silva, C. (2008). "Remittances, Institutions and Growth: A Semiparametric Study." *International Economic Journal*, 23(1), 111–119.

Vargas-Silva, C., Jha, S., & Sugiyarto, G. (2009). Remittances in Asia: Implications for the Fight against Poverty and the Pursuit of Economic Growth. ADB Economics Working Paper No. 182, Manila: Asian Development Bank.

World Bank, (2011). *Migration and Remittances Factbook 2011, 2nd Edition*. Washington, DC: IBRD and World Bank.

World Bank, World Development Indicators online database.