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Public Policy Under Article V (2) of the New York Convention in Korea: The Perspective of U.S. Judicial Opinion

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ABSTRACT

Public policy is one of the two grounds of denying recognition and enforcement of foreign awards initiated by a domestic court under the New York Convention. A broad interpretation of the public policy defense would undermine the strength and effectiveness of the New York Convention. Even though Korea takes a prudential stance on refusal of foreign awards, public policy is not a legal concept in the Korean law system. It is left open to judges in specific cases, and normally read as “fundamental social moral conviction interest in Korea” (the judgment of 14 Feb. 1995, 93Da53054). Fortunately, it is generally accepted that Korean court would interpret the notion of public policy by referring to international public policy rather than to domestic one (the judgment of 10 April 1990, 89 Daka20252). The two principles of interpreting public policy adopted in most jurisdictions should also further work in Korea. Korean judges could consider and maintain the concept of some notorious cases both in the USA and European countries.

I. Introduction

The effectiveness of international arbitral awards largely depends on the recognition and enforcement of a valid arbitral award by the court of which the successful party seeks.

The Convention on the Recognition and Enforcement of Foreign Arbitral Awards (Hereinafter referred to as the *New York Convention*, or the *Convention*) is an international agreement such as it

creates a dependable system of laws in all trading nations under which enforcement of awards is obtained. “The Convention allows the direct enforcement of an award based on such an agreement by a judgment obtained in the court of any Contracting State, subject to review by that court, not on the merits, but on grounds

of fairness, non-arbitrable, public policy, and due process”.¹

However, it also contains a public policy defense, which allows a signatory to refuse to enforce a non-domestic arbitral award if the award is contrary to its public policy. The public policy exception to enforcement has two folds. On one hand, it serves as safeguard to the unbridled power given arbitrators. On the other hand, it might be used as considerable latitude in refusing enforcement. Without a uniform system of international procedural rules of enforcement for foreign awards under the Convention, courts of different nations are free to establish their understanding of the public policy defense, precisely or selfishly. Korea, as a signatory, confronted the same problem as lacking of ample cases in this field even though Korea would follow the implication that the New York Convention has. This paper, from a comparative prospective, tries to formulate propositions on public policy in refusing enforcement of international arbitral awards in Korean courts.

II. Applicable Law on Enforcement of Foreign Awards under the New York Convention in Korea

II -1. Can A Foreign Arbitral Award be Enforced in Korea?

We first note that Korea became a signatory in 1973 to the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (hereafter referred to as the Convention) with a reservation to the effect that the Convention will be applicable to arbitration cases involving commercial disputes under Korean Law and that arbitration awards rendered only in the Convention member states will be enforced in Korea.

In view of the foregoing, the foreign arbitral award coming from a member state which would satisfy the

reservation requirements of Korea would likely be recognized and enforced by Korean courts without further review. However, the foreign arbitral award still may not be enforced if the party against whom the arbitral award is being enforced makes proof that the award had not been rendered properly due to such factors as the incapacity of the parties, lack of proper notice, compensation of the arbitral procedure not adhering to the agreement of the parties, or the award being contrary to the public policy of the country in which the award is being enforced, etc. (Article 5 of the Convention).

We note that in case where a foreign arbitral award is originated out of a non-contracting state to the Convention, Korean arbitration laws have no relevant provisions relating to the foregoing issue; so, in this case, we would need to rely on Korean law provisions pertaining to the enforcement of the foreign judgments seeking enforcement in Korea.

Specifically, under Article 217 of the Civil Action Laws of Korea, it is stipulated that the Korean courts should recognize and enforce a foreign judgment, provided that (a) such judgment was a final and conclusive judgment given by a court having valid jurisdiction, (b) the party against whom such judgment awarded received service of process in conformity with the laws of the jurisdiction of the court rendering judgment other than by publication or responding to the action without being served with process, (c) such judgment has not been obtained by fraud, is not contrary to public policy of Korea and has not been obtained in proceedings which were contrary to natural justice and (d) judgments of the courts of Korea are accorded reciprocal treatment under the laws of jurisdiction of the court rendering such judgment.

As for both the arbitral award coming from a non-contracting state to the Convention and the foreign judgment seeking recognition and enforcement in Korea, Korean courts would apply the legal principles described immediately above to decide whether such a foreign award or judgment should be enforced.

¹ Martinez, R., *Recognition and Enforcement of International Arbitral Awards under the United*

Nations Convention of 1958: The Refusal Provisions, *The International Lawyer* (1990) 24.

II-2. Recognition and Enforcement of Arbitral Awards: Law and Practice

II-2.1 General Rules: *Res Judicata*

The new Korean law stipulates that arbitral awards are in effect *res judicata* or a matter adjudged (Art. 37). As a result, arbitral awards are binding for the parties as the final court's judgments are. However, upon the application of a party the awards could be only enforced in virtue of the judgment made by a competent court. This approach is identical to that of the previous law. On the other hand, some legislation provides that arbitral awards can be enforced in virtue of the declaration done by a competent court. (e.g. new German law) It was suggested during the drafting of the new law that the judgment of a court for enforcing arbitral awards is more persuasive to parties than the declaration of court, though the latter might be more simple and convenient to a party. Regarding the enforcement of arbitral awards, the new law contains two separate provisions: one for domestic awards and the other for foreign awards.

II-2.2 Enforcement of Domestic Arbitral Awards

Under Article 38 of the new law the criterion for a domestic award is that the award should be rendered in the territory of Korea. This is a deviation from the position of Model Law and the New York Convention. Irrespective of where the arbitral awards were made, both the Model Law and the New York Convention draw a demarcation line between "international (or foreign)" and "non-international (or domestic)". In consideration of this demarcation line, the definition of domestic arbitration in new Korean law might look outdated. However, there is no substantive difference in practice with whatever demarcation line they have chosen. This is because under the new law both domestic and foreign arbitral awards should be enforced on the same grounds for refusing the enforcement.

II-2.3 Enforcement of Foreign Arbitral Awards (Art.39)

Korea is a contracting party of the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. In acceding to the Convention in 1973 Korea made two reservations: it recognizes and enforces only foreign awards made in the territory of another contracting state (reciprocity reservation) and limits the application of the convention to arbitral awards in disputes considered commercial in nature under Korean law (commercial reservation). The new law differentiates between the foreign arbitral awards to which the New York Convention applies and foreign awards to which the convention does not. While a limited number of countries has not yet ratified the New York Conventions, foreign awards made in a territory of non-contracting countries would be enforced in Korea: subject not to the New York Convention but to article 203, 476, and 477 of Code of Civil Procedure.

The New York Convention reduces the grounds for refusing the recognition and the enforcement of the arbitral award as much as possible and at the same time maintains the effectiveness of arbitration practice. A most intriguing question to foreign practitioners would be how the Korean courts interpret the grounds for refusing the enforcement of Article V of the New York Convention. Now two controversial issues in Korean courts are briefly examined here.

A. Public Policy of Article V(2) of New York Convention

Korean courts abide by the spirit of the New York Convention by interpreting the concept of public policy in a very strict manner. Regarding the enforcement of a foreign arbitral award, the Supreme Court of Korea held the Judgment of April 10th, 1990, 89 Daka20252, that the court should take into account the need for the stability of international as well as domestic trade in determining whether or not to enforce foreign awards. It is generally accepted that a Korean court would interpret the notion of public policy by referring to

international public policy rather than to the domestic one.

Furthermore, the Supreme Court of Korea also held in the Judgment of February 14th, 1995, 93Da53054, that even if the rule of foreign law applied in the foreign award is against the domestic mandatory law, the enforcement of the award should be granted unless its enforcement would result in the breach of a fundamental social moral conviction. In this case the application of the rule on a limitation of period in the Dutch contract law had contravened mandatory rules in Korean contract law.

In a judgment of the Seoul Civil District Court on December 30th, 1983, 82Gahap5372, the court rejected the respondent's argument of the lack of oral hearings on the public policy ground, stating in dictum that the public policy ground for vacating awards should be confined to the violation of nation's constitutional order or fundamental economic regulations. The above-mentioned cases show that courts are reluctant to refuse foreign arbitral awards in any but extreme cases. Therefore, foreign practitioners need probably not be concerned about the enforceability of foreign arbitral awards in Korea.

B. Procedural Fairness of Article V (1)(b) and (d) of the New York Convention

Under the New York Convention, the enforcement of the foreign arbitral award may be refused if the party against whom the award is invoked was not given proper notice of the arbitral proceedings or was otherwise unable to present a case. This provision allows the forum a room to apply its municipal procedural law for the enforcement of foreign arbitral awards. However, Korean courts have also restricted it to the fundamental justice rather than applying mandatory rules of domestic procedural law as has been done with public policy grounds. In the above-mentioned Judgment of the Supreme Court on April 10th, 1990, 89 Daka20252, it was held that the test of fundamental procedural injustice is whether or not the party was so seriously deprived of an opportunity to defend himself in arbitral proceedings. In this case a

party argued against enforcing the foreign arbitral award on the ground of the lack of proper notice of arbitral proceedings.

The Seoul High Court, in the Judgment of March 15th, 1995, 94Na11868, also rejected the argument that, since a party did not satisfy the requirement of the discovery procedure under Californian law in which the arbitral award was rendered, the enforcement should be refused on the procedural fairness ground of V(1)(d) of the New York Convention. The court concluded that the breach of discovery procedure does not result in violating the fundamental procedural fairness from an international point of view.

Undoubtedly, Korea takes a prudential stance on the refusal of foreign awards, but when it comes to the terms of public policy in Art. V (2), the courts in Korea have to exercise their own discretion in the circumstance of Korea's judicial traditions. Therefore, it seems crucial to open their eyes to other jurisdictions of either western or eastern countries.

III. Public Policy in Enforcement of International Arbitral Awards

III-1. Overview

Article V(1) of the New York Convention details five allowable defenses that may be raised by the parties in the recognition and enforcement of the award, whilst Article V(2) states two grounds on which the court may deny enforcement on its own motion: the subject matter of the dispute is not arbitrable or the recognition of the award would violate the public policy of the forum state. It is the final express defense of Article V(2) that has been the most frequently litigated.

“In general, public policy is a tradition ground for the refusal of enforcement of foreign arbitral awards and foreign judgments, as well as for the refusal to apply a foreign law. A public policy provision can be found in almost every international convention or treaty relating to these matters. Its function is basically to be the guardian of the fundamental moral convictions or

policies of the forum”.² However, it is an elusive concept that is difficult to define because it manifests the fundamental economic, legal, moral, political, religious and social standards of every state.

Accordingly, the degree of fundamentality of moral conviction or policy varies in every case in various nations.³

It should be added that even though “it is generally accepted that the arbitrable forms part of the general concept of public policy and that therefore Art. V (2) (a) can be deemed superfluous”,⁴ Art. V(2)(a) and V(2)(b) are still used as separate grounds of refusal of enforcement for historic reasons, as it follows the provision in the Geneva Convention of 1927, the ICC Draft Convention of 1953, and the ECOSOC Draft Convention of 1955.

Nevertheless there are no disadvantages in practice according to this distinction.⁵

It should be noted that public policy is not a legal concept; fundamental social moral conviction interest (the basic social order and moral rules of Korea) is used in a 1995 case (the judgment of Feb 14, 1995, 93Da53054) in Korea instead. Some courts have read “public policy” to mean that a decision may not violate domestic laws, but most courts have interpreted it as “international order”.⁶ As for the definite meaning of public policy in the Convention, it was left open to the judge in specific cases, which should adopt a uniform position accepted in most jurisdictions.

III.2 General Attitude Toward Public Policy in Different Jurisdictions

Some legal scholars in the U.S.A. doubted that public policy defense could become a “catchall” means for parties seeking to vacate an international arbitral award.⁷ Similarly, the American Arbitration Association worried that the public policy clause would give the court system “considerable latitude in refusing enforcement.”⁸ Actually, although the public policy defense is the most frequently invoked of the seven defenses enumerated in Article V, the contrary result has occurred. There are rarely successful cases pleading the public policy defense.⁹ Recognizing the principle purpose of the Convention is to encourage the recognition and enforcement of commercial arbitration agreements in international contracts and to unify the standards by which agreements to arbitrate are observed and arbitral awards are enforced in the signatory countries; most courts favor recognition and enforcement of international awards whenever possible. Courts in the United States take the pre-enforcement attitude toward recognizing and enforcing awards rendered in both domestic and foreign arbitration, which lead to consistently upholding the arbitral process.¹⁰ The German courts accept a violation of public policy in “extreme cases only”. The criteria the Swiss courts adhere to seems considerably clear that public policy will only be deemed to be present where the innate feeling of justice is hurt in an intolerable manner, where fundamental provisions of Swiss legal order have been disregarded, or where the Swiss legal thinking compels prevalence over the applicable or applied law.¹¹ In the U.K., the reported cases relating to public policy are paucity in number. It is held that the English courts had not faced a case of sufficient seriousness which merited a refusal of enforcement.¹²

² Berg, A.J. van den (1994), p.360.

³ Seriki, H., *Enforcement of Foreign Arbitral Awards and Public Policy-a Note of Caution*, The Arbitration and Dispute Resolution Law Journal (2000) 9, pp.195-196.

⁴ Berg, A.J. van den (1994), p.360.

⁵ *Ibid*, pp.360-361.

⁶ *Qiu.X.W.(2000)11*, footnote 18.

⁷ Bouzari, E.H., *The Public Policy Exception to Enforcement of International Arbitral Awards: Implications for Post-NAFTA Jurisprudence*, Texas International Law Journal (1995) 30, p.208.

⁸ *Ibid* at 210.

⁹ Berg, A.J. van den (1994), p.366.

¹⁰ Martinez, R. (1990) 24.

¹¹ Berg, A.J. van den (1994), p.365.

¹² Seriki, H. (2000) 9, p.195.

III.3 Judicial Standards in Interpreting Public Policy

III-3.1 Public Policy is Construed Narrowly

Public Policy, in its very nature, is the fundamental moral convictions and policies of the forum, which varies from country to country.¹³ The small number of successful cases invoking a public policy defense, to a large extent, contributed to the attitude of most courts construing it narrowly.¹⁴ *Parsons & Whittemore Overseas Co. v. Societe Generale de L'Industrie du Papier*¹⁵ is the first case that an American court was called on to interpret directly the extent of the public policy defense. In this case, American citizens in Egypt had an obligation to abandon the construction of a mill when U.S.-Egyptian relations were severed. The court overruled this defense on public policy. Without definite guidelines from the legislative history of the New York Convention or any convincing arguments from the commentators, the Court of Appeals for the Second Circuit drew inferences from the Convention as a whole, and recognized that “[t]o read the public policy defense as a parochial device protective of national political interests would seriously undermine the Convention’s utility”, thus “...the Convention’s Public Policy defense should be construed narrowly. Enforcement of foreign arbitral awards may be denied on this basis only where enforcement would violate the Forum State’s most basic notions of morality and justice”.¹⁶ The court simultaneously emphasized that the defense was not to be used to protect national interest, but rather that, by acceding to the Convention, the United States was subscribing to a supranational interest. Finally, the court refused to grant the judgment and instead issued an order confirming RAKTA’s award.¹⁷

Obviously, a broad interpretation of the public policy defense would undermine the strength and effectiveness of the New York Convention, and in turn cast doubt on the effectiveness of international arbitration.¹⁸ On the other side of the spectrum, American courts who so favor the arbitral are criticized for going too far in limiting public policy to considerations of the forum State’s most basic notions of morality and justice to make courts blindly pay lip service to international arbitral awards.¹⁹

III-3.2 Distinction Between Domestic Public Policy and International Public Policy

Public policy in the Convention refers to “international public policy” other than “domestic public policy”, which can be traced back to the Geneva Convention of 1927.²⁰ The framers of the Convention, therefore, intended to limit the scope of public policy so that foreign arbitral awards are subject only to those principles and concepts of public policy which are relevant for relations with a foreign element and not to extend to international cases with purely internal notions. Since the scope of domestic public policy is wider than that of international public policy, what is considered to pertain to public policy in domestic cases does not necessarily pertain to public policy in international cases.²¹ Considering the relationship between Article V(2)(a) and (b), this distinction is also applicable to the arbitrable of the subject matter.

Huge amount of cases embody this distinction expressly or implicitly; as a result, only in very serious cases the courts would deny the enforcement of an arbitral award.²² *Scherk v. Alberto-Culver Co.* is a landmark case decided by the Supreme Court of U.S. which distinguished domestic public policy from the narrower concept of international public policy. The question in *Scherk* was whether to allow the arbitration

¹³ Berg, A.J. van den (1994), p.376.

¹⁴ Seriki, H. (2000) 9, p.195.

¹⁵ 508 F. 2d. at 969 (“RAKTA”).

¹⁶ Berg, A.J. van den (1994), p.363.

¹⁷ Martinez, R.(1990) 24.

¹⁸ *Ibid.*

¹⁹ Berg, A.J. van den (1994), p.367.

²⁰ *Ibid* at 362.

²¹ Seriki, H. (2000) 9, p.196.

²² Berg, A.J. van den (1994), p.362-366.

of a securities issue in an international contract despite federal statutes prohibiting the waiver of a right to a trial in a domestic securities case. The Supreme Court denied the decision of district and circuit courts, which relied on the Supreme Court's decision in *Wilko v. Swan* to refuse Scherk's attempt to stay litigation. The Supreme Court noted that the crucial distinction between *Wilko* and *Scherk* was the truly international nature of the contract in the latter case. Such an international contract involves considerations and policies significantly different from those controlled in *Wilko*.²³

The court of Germany clearly stated that in the case of a foreign award, not every infringement of mandatory provisions of German law constitutes a violation of public policy.²⁴

IV. Grounds For Refusal Under Public Policy

“What constitutes a violation of public policy is largely a question of fact and is to be decided on an *ad hoc* basis”.²⁵ According to large number of cases, this part illustrates some aspects as the grounds of the public policy defense

IV-1 Subject Matter is Non-Arbitrable

Non-arbitrable is a ground that may be raised by the enforcing court on its own motion under its local standards, as it reflects a special national interest in a judiciary. If the grounds of a dispute cannot be settled by arbitration under the domestic law of the enforcing state, a court may refuse to enforce an award granted through a foreign arbitration panel. Even though the subject matter differs in different nations, classical examples of non-arbitrable subject matters are anti-trust,

the validity of intellectual property rights, family law and the protection of certain weaker parties.²⁶ The subject matter may be claimed by the local court non-arbitrable when this country states a reservation of Article I (3), which, according to the Convention, is only applicable to differences arising out of legal relationships, whether contractual or not, which are considered commercial under the national law of the state making such a declaration. Korea is one of the nations who claimed the commercial reservation.

Here the case of *Scherk* is a good example to clarify that the distinction between domestic and international public policy in non-arbitrable issue is indispensable. The Supreme Court held that a subject matter arising out of a securities transaction is non-arbitrable in domestic contract; however, in the circumstance of an international transaction, the dispute is arbitrable.²⁷ In another case, the United States District Court of New York stated that in virtue of the United States Public Vessels Act, disputes concerning the salvage of a United States warship cannot be submitted to arbitration. There are also cases of denying enforcement foreign awards on the grounds that an Act of State is not arbitrable. However, another U.S. case, *Mitsubishi Motors Corp. v. Soler Chrysler-Plymouth, Inc.*²⁸ opens a question to whether the criteria varies in deciding the award is arbitrable or the award is unenforceable in respect of non-arbitrable because the First Circuit court confirmed that the antitrust claim is non-arbitrable, which is created by some circuit courts, disregarding the international nature of the contract concerned.

Furthermore, a new trend needs to be noticed as disputes over patent rights are now arbitrable under congressional legislation. Similarly, agreements to arbitrate alleged violations of U.S. racketeering laws arising from international transactions will be enforced under the New York Convention.²⁹

²³ 417 U.S. 506 (1974).

²⁴ Seriki, H. (2000) 9, p.196.

²⁵ Berg, A.J. van den (1994), p.376.

²⁶ *Ibid*, p.369.

²⁷ Berg, A.J. van den (1994), p.362.

²⁸ 473 U.S. 614 (1985).

²⁹ Martinez, R.(1990), p.24.

IV-2 Due Process— Lack of Impartiality of the Arbitrator

Art. V (1)(b) is considered part of public policy for the reason that the public policy provision of Art. V (2)(b) co-exists with the other provisions in the Convention.³⁰ Since the impartiality of arbitrator is a fundamental requirement of every arbitration forum, the lack of impartiality of an arbitrator can be an alleged violation of public policy concerning the requirement of due process. Two principles concluded by a court in specific appear critically important. The first one is that the assertion that of lack of impartiality must be made in good faith. In a case,³¹ the respondent asserted refusal of enforcement on the ground that one of the arbitrators was the president of a firm that served as general agents of a ship owning corporation which had pursued a claim against it in prior arbitration and court proceedings. The court found that the arbitrator's relationship with the respondent was "far too tenuous...to require the disqualification of an experienced and respected maritime arbitrator, particularly where [the respondent] offers no challenge to [the arbitrator's] personal integrity". The second principle is that the court only prepares to refuse the enforcement of an award where the arbitrator has effectively not acted in an impartial manner. Consequently, a situation where there are circumstances which might have created a lack of impartiality on the part of the arbitrator cannot constitute the grounds for refusal.³² There are some other bases on which one can claim refusal of due process. For example, by not forwarding to the respondent a letter submitted by the claimant to the arbitrators, or if the names of arbitrators were not made known to the parties, and so forth.³³

V. Conclusion

It is true that the New York Convention proposes to encourage the recognition and enforcement of foreign arbitral awards and to create a transnational rule of law that promotes arbitration as an efficient form of dispute resolution. This aim will succeed in so far as the courts in Contracting States balance the relationship between upholding public policy and offending international comity by construing the public policy properly and loyally, as the public policy defense is the most frequently pled of the seven defenses enumerated in Article V. "The law in this area developed not from any clear and steady policy, but from social convenience and rough justice",³⁴ the practical experience in other jurisdictions would merit Korean courts whose legal traditions favors such terms as "fundamental social moral conviction interests", as decided in the judgment of February 14th, 1995, 93Da 53054, in the Supreme Court of Korea other than "public policy". At present, the judicial attitude in favor of international commercial arbitration is just emerging in various countries.³⁵ The rigid and inflexible approach adopted in most English courts, where the English public policy lies in the center of the matter, may be seen as little more than judicial chauvinism. Whereas, the consistent and well-articulated policy developed by the U.S. courts should be emulated by not only English courts but also Korean courts.

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1. Berg, A.J. van den (1994), *The New York Arbitration Convention of 1958*, Deventer: Kluwer Law and Taxation Publishers.
2. Bouzari, E.H. (1995), *The Public Policy Exception to Enforcement of International Arbitral Awards: Implications for Post-NAFTA Jurisprudence*, Texas International Law Journal, 30: pp.205-221.

³⁰ Berg, A.J. van den (1994), p.376.

³¹ *Transmarine Seaways Corp. of Monrovia V. Marc Rich & Co. A.G.* (U.S. no.30).

³² Berg, A.J. van den (1994), pp.377-378.

³³ *Ibid*, pp.366-367.

³⁴ Seriki, H.(2000) 9, p.193

³⁵ Berg, A.J. van den (1994), p.368

3. Hu, I. (2001), *Setting Aside an Arbitral Award in The people's Republic of China*, The American Review of International Arbitration, 12: pp.1-43.
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Sustainability Issues in Juvenile Fishing in the Philippines

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ABSTRACT

The study examines the problem of juvenile fishing as applied to anchovies, sardines, *siganids* (rabbitfish), and tuna fisheries in the Philippines and discusses the issues revolving around the sustainability of such fisheries in the long run. Results of the study showed that overfishing has resulted in the overexploitation of adult anchovies, sardines, rabbitfish, and tuna, and that juvenile fishing exacerbates the problem. The Philippines already has an enabling law that promotes the protection and conservation of Philippine fisheries resources. The provisions of the 1998 Philippine Fisheries Code range from regulating mesh sizes and types of fishing gear used to the establishment of marine protected areas and closed fishing seasons. Like any piece of legislation, enforcement accompanied by community stakeholder participation is crucial in achieving the sustainability of fisheries resources in the long term.

I. Introduction

The Philippines is ranked among the top fish producing countries in the world. For instance, the country is recognized as a top producer of tuna in the western and central Pacific Ocean (WCPO) region. In 2006, tuna remained the country's top export fishery commodity with a total net export value of USD573 million (USD768 million worth of exports and USD195 million worth of imports) (Barut and Garvilles, 2010). Aside from tuna and other large pelagic fishes, other principal stocks exploited in the Philippines include small pelagic (those that are found close to the water

surface) such as anchovies and sardines, demersal or bottom-dwelling fishes such as grouper and catfish, and invertebrates such as crabs, squid, and shrimp. Small pelagic fish contribute to about half of the total landing of marine species in the Philippines, and are one of the major sources of inexpensive animal protein for lower-income groups (FAO, 2005). In 2007, sardines and anchovies accounted for about 12% (307,000 MT) and 3% (76,000 MT) of the total marine fish capture production, respectively (Bureau of Agricultural Statistics (BAS), 2007).

The Philippine fisheries industry is comprised of marine (municipal and commercial) fisheries, inland fisheries, and aquaculture. Municipal marine fisheries operate in coastal waters within 15 km from the coastline using vessels weighing ≤ 3 gross registered tonnage (GRT). Handline vessels used to be part of this category, but are now considered separately with the implementation of R.A. 9379, or the Handline Fishing Law (Barut and Garvilles, 2010). Commercial fisheries operate outside municipal waters using vessels >3 GRT. Inland fisheries operate in inland waters such as lakes, reservoirs and rivers, including estuaries. Aquaculture involves aquatic organisms in fresh, brackish, and marine waters. Given its archipelagic nature, it is unsurprising that the Philippines has vast fishery resources at its disposal totaling over 2.2 million km² of highly productive seas. However, all of the country's main fish species and marine organisms are showing signs of overfishing (FAO, 2005).

II. Juvenile Fishing as Part of the Problem of Overfishing

Overfishing occurs when fishing activities reduce fish stocks below an acceptable level. In economic terms, the "acceptable" level is when the fish catch has yet to exceed the maximum economic yield of the fishery where resource rent is at its maximum. There are four internationally recognized types of overfishing: (i) growth overfishing, when fish are harvested at a size that is smaller than the size that would have produced the maximum yield; (ii) recruit overfishing, when the mature adult or spawning population has been depleted such that it cannot replenish itself; (iii) ecosystem overfishing, when the balance of the ecosystem is altered; and (iv) Malthusian overfishing, when overpopulation and poverty lead to the use of efficient but destructive fishing methods which eventually destroy the resource (McManus et al., 1992). Juvenile fishing mainly falls under the first category, and is defined as the harvesting of young and newly hatched fish. McManus et al. (1992), Silvestre et al. (2003), and Hermes (2004) have noted adverse consequences of

capturing early juveniles, such as disrupting the natural biological cycle of growth and reproduction of many fish species. For instance, Hermes (2004) notes that high mortality due to predation and starvation is observed at the early-life stages of marine fish, and catching them during this time could lead to more severe overfishing. The Commission of the European Communities (2007) notes that capturing juveniles of a targeted species results in lower catch opportunities and a lower spawning biomass in the future.

Subsequent discarding of the unwanted by-catches by fishers tend to maximize the value of the landing (known as "high-grading") especially when different sizes or qualities of the fish differ in market prices or when species with different market values are caught together (Commission of the European Communities, 2007). The priority for storage is less for organisms with little to non-existent value in favor of organisms with high-value. Quota restrictions and minimum landing sizes also contribute to the existence of discarded fish. The problem becomes more manifest in situations where fry for fish culture are caught and the by-catch is left onshore. A high level of by-catch is related to the capture of small-size or juvenile fish. Fish that are naturally small in their mature stages result in the capture of juveniles of other species which could grow much bigger at their mature stages. This may eventually lead to stock depletion and possibly species extinction. However, due to costly stock assessment monitoring and the inherent difficulty in understanding the biology of overfishing, these are often overlooked in favor of the more obvious economic consequences of overfishing/juvenile fishing (Soliman et al., 2009).

As food fish, juveniles have low to negligible immediate economic value. It is more viable if, for instance, they can be grown to a marketable size, but the cost of the grow-out must be considered as well as the foregone economies of scale from harvesting a large number of juveniles at a time (Hair et al., 2000). Tokrisna (1999) made use of the Von Bertalanffy (1938) growth relation which entails determining the length-

weight relationship of the juvenile fish, the total weight of the juvenile fish catch, and the number of juveniles which survive to full marketable size. The actual economic value of the catch represents the economic rent of juvenile fishing and is obtained by subtracting the costs from the revenues. Estimates of the market value of the potential marketable catch using Baranov's (1918) catch equation under different scenarios on the reduction of juvenile fish catch can be compared with the actual economic value to obtain the opportunity cost of juvenile fishing. Unfortunately, there is a lack of comprehensive studies that examine this economic aspect of juvenile fishing.

III. The State of Juvenile Fishing in the Philippines

Anchovies and Sardines

In the Philippines some specialized fisheries target post-larvae or early juveniles of fish species due to their unique markets. For instance, early juveniles of anchovies ("*dulong*") and *siganids* or rabbitfish ("*padas*") are considered delicacies. Milkfish fry is targeted as seed stock for aquaculture.

Anchovies and sardines are schooling species occurring mostly in coastal waters. The anchovy catch reaches its peak between September and November whereas sardine production reaches its peak from June to October (Dalzell and Corpuz, 1990). Gear used for anchovy fishing includes beach seines, round-haul seines, bagnets, baby trawls, and fish corrals. Gillnets, purse seines, *basnigs*, ring nets, and beach seines are the main fishing gears for catching adult sardines (Trinidad et al. 1993).

In 2009, the FishBase Information and Research Group, Inc. (FIN) in partnership with the WorldFish Center verified the catch sustainability of *dulong* in Laiya, San Juan in Batangas and found that catching *dulong* increases mortality of late stage larvae that have survived the critical period after spawning and thus

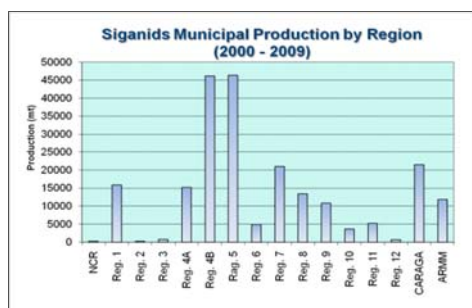
obstructs the process of recruitment for the species. This finding is noteworthy given since economic analysis on adult stage anchovies and sardines was reported to already be at a level of biological and economic overexploitation based on time series analysis of catch and effort data in the early 1990s (Trinidad et al. 1993). This seems to indicate that juvenile fishing of *dulong* may be aggravating an overfishing problem that has persisted from 20 years ago.

Siganids (Rabbitfish/Spinefoots)

The *siganids* are a well-defined group of mainly small to moderate-sized demersal fish that are typically found in sea grasses and reef flats. Their life cycles are characterized by a strong seasonality as individual fish move from one type of habitat to another (De la Paz and Aragonés, 1990). *Siganid* juveniles emerge in the months of March, April, and May, coinciding with the new moon. De la Paz and Aragonés (1990) identified the gill net and hand spear as the most common gear used to catch *siganid* adults, followed by bamboo traps, fish corrals, and drive-in nets. In catching juvenile *siganids*, the seine net – a large plankton seine with a bag end pulled between two sailing rafts – is used.

Data from the National Stock Assessment Project (NSAP), under the Bureau of Fisheries and Aquatic Resources (BFAR), shows that Regions IV and V are responsible for the largest volume shares of *siganid* production in the country, followed by Regions I, VII, and CARAGA (Figure 1). These include both adult and juvenile *siganids*. This is somewhat validated by the observation of Hermes (2004) that the capture of juvenile *siganids* is widespread in the Philippines, particularly in parts of Pangasinan, Northern Mindanao, Palawan, and Cebu. Also, the production of *siganids* has increased over time (Figure 2). Commercial fishing of *siganids* is almost non-existent, as municipal fishermen are the major contributors of the *siganid* fish catch.

Figure 1. *Siganid* Municipal Production by Region, in MT, 2000-2009



Source: NSAP

Figure 2. Production Trend of *Siganids* in the Philippines, 1980-2009



Source: NSAP

Soliman, et al. (2009) analyzed three species of *siganids* in Lagonoy Gulf and found the total juvenile yield declining steeply from 357MT in 2001 to 133MT in 2004. The catch-per-unit effort (CPUE in kg/trip/gear/unit) of bagnet and seine net also followed the same pattern, with bagnet CPUE experiencing a decrease of almost 55% for the same period. This is empirical evidence that these fish have been heavily overfished due to excessive harvesting of juveniles and a high exploitation rate of adult fish. This will inevitably lead to depletion in the *siganid* stock if left unregulated.

Siganid fisheries in Pangasinan are already at a level of biological exploitation, according to studies conducted by De la Paz and Aragonés (1990) and

McManus et al. (1992). In 1999, the Bolinao Coastal and Fisheries Resources Management Ordinance was passed, with Section IX of the Fishery Ordinance No. 01 (Series of 1999) governing the management of *siganid* fisheries. Section 53 regulates the construction and operation of fish corrals in designated areas. The municipal government even suspended the awarding of rights to fish corrals (Pinat et al. 2000). A closed season on *siganid* spawners/breeders was also declared (Section 54) during the months of February, March, and April, and three days after the new moon during April and May. This ensures a continuous supply of adult *siganids*.

Tuna

In the WCPO region, fisheries mainly target three kinds of tuna. Skipjack tuna is a fast-growing species with a relatively short lifespan (~3 years) and has rapid population turnover. Yellowfin tuna has a longer lifespan (~7 years) and has moderate population turnover while the bigeye tuna lives up to at least 12 years and grows more slowly than yellowfin (Secretariat of the Pacific Community, 2008). Tuna fisheries in this region are managed by the Western and Central Pacific Fisheries Commission (WCPFC), a fishery management organization with 23 member countries. These include large domestic countries such as Japan and the Philippines, Pacific island states such as Kiribati and Vanuatu, and distant water fishing states (granted access through bilateral or multilateral agreements) such as the European Union and the United States (Bailey et al., 2011).

Table 1 summarizes statistics on the Philippine tuna catch for 2005-2008. The estimates refer to tuna that are landed on Philippine ports regardless of where they were caught. Skipjack tuna comprises a large proportion of total commercial harvest, while municipal fishing mainly targets yellowfin tuna. Both activities show an increasing trend over time. The volume of the bigeye tuna catch is nearly identical for commercial and municipal fishers.

Table 1. Total Tuna Catch in the Philippines, by Species, in MT, 2005-2008

Year	Commercial			Municipal			TOTAL
	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Big-eye	
2005	112,696	69,833	11,600	30,368	44,194	10,086	278,777
2006	130,930	66,334	15,334	33,396	47,063	14,137	307,193
2007	152,098	82,660	17,325	33,766	51,832	16,891	354,572
2008	181,563	116,528	17,174	40,447	51,882	17,967	425,561
TOTAL	577,287	335,355	61,433	137,977	194,971	59,081	

Source: BAS, 2005-2008

In terms of gear type, purse seine fishers mainly catch skipjack while handline and longline fishers concentrate on yellowfin tuna (Table 2). Catches of skipjack for purse seine fishers have increased from 2005 to 2008; however, catches of big-eye tuna have declined over the same period. This somehow validates previous research which states that the big-eye tuna stock is the most overexploited of the tuna species in the region. Bailey et al. (2011) cites a problem of juvenile fishing of yellowfin and big-eye tuna in the WCPO region. These fish, along with skipjack tuna and the

adult yellowfin, are often found grouped together around floating objects known as fish aggregating devices (FADs), such as a log or coconut, which are mainly used by purse seine fishers to attract skipjack and adult yellowfin. Use of these FADs has been found to increase catch efficiency. Unfortunately, huge numbers of juvenile yellowfin and big-eye are invariably caught as by-catch, to the detriment of longline and handline fishers which target the adult versions of these fishes.

Table 2. Total Tuna Catch in WCPO*, by Species and Gear Type, in MT, 2005-2008

Year/Species	Handline (small)	Handline (large)	Longline	Purse seine	Ringnet	Unclassified	TOTAL
2005							278,767
Skipjack	48,217	–	2,491	91,372	12,363	836	155,279
Yellowfin	51,295	12,990	3,470	36,280	5,979	1,775	111,789
Bigeye	3,078	670	729	6,719	336	167	11,699
2006							307,223
Skipjack	53,132	–	2,745	97,724	13,623	922	168,146
Yellowfin	56,524	14,498	3,824	44,420	6,175	1,956	127,397
Bigeye	3,391	555	804	5,923	823	184	11,680
2007							354,798
Skipjack	61,327	–	3,169	128,178	16,629	1,064	210,367
Yellowfin	65,241	16,853	4,414	39,308	6,652	2,257	134,725
Bigeye	3,914	521	927	3,418	713	213	9,706
2008							385,671
Skipjack	61,327	–	3,330	146,527	17,761	1,110	230,055
Yellowfin	65,241	15,712	5,052	43,787	8,421	7,915	146,128
Bigeye	3,914	637	643	3,762	322	210	9,488

*data unavailable from national fishery statistics

Source: WCPFC Tuna Fishery Yearbook, 2008

Bailey et al. (2011) explores a cooperative management of tuna fisheries in the WCPO region to mitigate the losses from growing overfishing. Using a game theory approach involving purse seine, handline, and longline fishers, the simulations pointed to higher

rents for the whole of fishery fleets with the total elimination of FAD fishing. This however leads to huge losses for the purse seine sector due to the resulting decline in its fish catch. This would include a reduction in the catch of juvenile fish as well. Bailey, et al. (2011)

proposes side payments from the handline and longline fishers to the purse seine fishers, either with monetary compensation or even with non-monetary arrangements such as a share of the handline/longline catch, or a lease of fishing grounds. However, the costs of management of such arrangements will need to be considered, especially as the fishery quota markets in the region (including the Philippines) are still in their infancy. The authors also mentioned the possibilities of temporal and spatial restrictions in place of a total ban, size limits on by-catch, as well as economic incentives such as taxes or subsidies in reducing by-catch.

Since its creation three years ago, WCPFC has been unsuccessful in reducing fishing mortality of big-eye and yellowfin tuna. Problems that arose include: (i) unwillingness of countries involved in purse seine fishing to limit fishing mortality due to the expected negative impacts on the skipjack harvest; (ii) unwillingness of countries involved in longline fishing that target big-eye tuna to reduce their catches due to their perception that juvenile fishing is the source of the problem; and (iii) difficulties faced by legislators in the Philippines (and Indonesia) to implement effective regulations on the domestic tuna fishery (Secretariat of the Pacific Community, 2008).

IV. Issues of Sustainability

While fishery resources are renewable, they are certainly not inexhaustible. From the previous discussions, the existence of juvenile fishing is worsening the present problem of overexploitation of fishery resources, threatening its sustainability. To be sustainable, the amount of fish that can be caught should just balance the growth and replenishment of the fish population (FISH Project, 2006). This ensures that the fish stocks can recover and that they can be eventually restored to their natural productivity.

Republic Act (R.A.) 8550, or the Philippine Fisheries Code of 1998, is the main enabling law on fisheries in the country. R.A. 8550 provides the legal framework with which sustainability of the fisheries resources, including juvenile fish, can be promoted. For instance, it tasks the local government units (LGUs) with the duty of protecting and conserving fishery resources up to 15 kilometers from the coastline, which is the boundary of municipal waters. R.A. 8550 has several provisions regulating fish catch in terms of species, size, and even the sex and maturity stage. These include technical limitations on the type of fishing gear used and mesh size, spatial restrictions on the fishing area, and temporal restrictions on the allowable days for fishing (Table 3).

Table 3. Regulations Involving Fishing Operations in the Philippines

Regulatory instrument	Specifications
Technical controls	
Mesh regulation	Prohibition on the use of nets with mesh smaller than that which may be fixed by the Department of Agriculture (DA).
Gear ban	Prohibition of fishing in municipal waters and in all bays using "active" fishing gear. Prohibition on the use of <i>muro-ami</i> , other methods, and gear destructive to coral reefs and other marine habitats. Prohibition on the use of <i>superlights</i> in fishing.
Spatial restrictions	
Area closure	Prohibition of fishing in overfished area. Prohibition of fishing in areas declared by the DA as reserves, refuge, and sanctuaries.
Temporal restrictions	Prohibition of fishing during closed season.
Other	Prohibition on the capture of <i>sabalo</i> (full-grown milkfish) and other breeders and spawners.

Source: FAO (2005), Philippine Fisheries Code

The Fisheries Code's provision on mesh sizes is probably one of the most important regulations in order

to minimize growing overfishing. Typically, fishing gear with small mesh sizes tend to capture large

quantities of juvenile fishes, even non-targeted species as well, which relates to the problem of by-catch brought up in the earlier discussion on tuna fishing in the WCPO region. Modifying fishing gear (the fine-sized mesh nets) or developing new gear or fishing methods that reduce by-catch will go a long way in reducing waste of juvenile fish and other non-target species (AFS, 2011). This may lead to a reduction in short-term profitability as net short run costs for a fishery increases. However, economic benefits from a reduction of by-catches of juvenile fish will result in larger and healthier stocks and thus increased fishing opportunities in the long run (Commission of the European Communities, 2007).

This is especially true in the harvesting of fishes which are naturally small in their mature stages. In a study of *iganids* in Bais Bay in Negros Oriental, Luchavez and Abrenica (1997) recommended banning the use of 3-cm. mesh sized nets by beach seine, gill net, fishnet, and fish corral. The seine net gear is believed to be detrimental to the successful replenishment of juvenile rabbitfish (McManus et al. 1992). The Code's provision on mesh size unfortunately excludes those nets that are specially designed to capture fry for fish culture or the small-sized fishes which include *dulong*, *padas*, and juvenile milkfish. Thus, continuing to fish juveniles of these species might prove to be unsustainable.

In relation to this, gear bans are also essential to prevent the Malthusian type of overfishing when fishermen go for high yield, low production efforts through the use of poisons and dynamite. Such methods directly or may indirectly target juvenile species. The FISH Project (2006) cites beach seines, scissor nets, drive-in nets, and round-haul seines as some of the gear types that are "destructive" in the sense that using this gear may damage corals, seagrass, and marine habitats. Luchavez and Abrenica (1997) points out the importance of having the fishing community understand the necessity of protecting this ecosystem. In

this way, the community can become part of the enforcement effort and can police its own inhabitants.

R.A. 8550's provision on area closures have led to the establishment of marine protected areas (MPAs) in the Philippines. MPAs are areas of seas that have quotas or total bans on fishing within its boundaries. This protects the marine habitats and enables juvenile fish to replenish its population (Magpantay and Abdella, 2008). The Philippines has seen a rapid proliferation of MPAs over the past 20 years. Reefbase.org found 339 actively-managed MPAs: 304 are managed at the municipal level 29 are managed at the national level, and one MPA is managed as an individual site.

Magpantay and Abdella (2008) go on to state that MPAs have proven to be a successful fishery management tool that can be effectively managed by local communities and municipal governments. These areas also bring about an alternative source of income in the form of tourism and scuba-diving. However, a survey of 212 MPAs by the Coastal Conservation and Education Foundation found only 5 areas with an excellent rating. These MPAs are well-managed with consistent enforcement and legal support. More than half of the surveyed MPAs (54%) have not progressed beyond the implementation phase (Reefbase.org). Given the huge institutional as well as opportunity costs of conceptualizing and setting up of these marine protected areas, it is imperative that these plans be fully implemented to promote the sustainability of these fish resource-rich areas.

Declaring a closed fishing season during the respective spawning seasons may minimize juvenile overfishing. This has been the case in the earlier discussions on *iganid* fishing in Bolinao, Pangasinan but may be replicated in the situation of *dulong* fishing or tuna fishing. Although the benefits of a higher adult catch can be realized, the costs of monitoring and enforcement may be prohibitive, particularly in the wide open WCPO region where tuna fishing takes place.

Monitoring schemes for the above regulations that need to be put in place are those that are readily implemented in practice and are cost-efficient. Sheriff, et al. (2010) cites that involving fishermen in planning and decision-making can be utilized to achieve the successful management of marine protected areas, seasonal closures, gears, and mesh size regulations. This is because the fishermen are in a better position regarding information on seasonality, spawning, and habitat preferences of the targeted species in their territorial waters. Thus the government needs to educate and inform the fishermen about their rights and obligations in making the fishery sustainable, which Galvez (1991, as cited by Sheriff, et al. 2010) acknowledges can stimulate ownership, proprietary, and protective interest in surrounding fishery territories and significantly discourage destructive fishing practices. Economic and social impact assessments must therefore be made on the level of regulations for specific fisheries and the relevant fishing communities.

V. Conclusion

Juvenile fishing, as part of the larger problem of overfishing, is mainly fueled by the desire of fishers to extract greater economic rent, at least in the short term. However, such actions may not be sustainable and may lead to adverse economic implications in the long term. Eventually, lessening juvenile fishing will help improve the catch rate of adult species, and the overall state of the fishery. Increases in the average size of the fish will lead to greater socio-economic benefits and improvement in the livelihood of fishermen.

Given the importance of the fisheries sector in the economic development of an archipelagic country like the Philippines, the government needs to ensure the enforcement of the provisions embodied in the Philippine Fisheries Code. Juvenile fishing may still persist under circumstances where enforcement is weak or the legal consequences do not match the immediate economic benefits from engaging in juvenile fishing. Also, any new policy that will be crafted must take into

account the structure and economic situations of each specific fishery and the dependent coastal communities.

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A Comparative Analysis of Korean and Chinese Restaurants

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ABSTRACT

This study compares Korean and Chinese restaurants on the basis of American perceptions. Questionnaire responses were obtained from American customers who have dined at Korean and Chinese restaurants in Hawaii, U.S.A., in order to examine the importance of DINESERV factors and the relationship between customer satisfaction and revisit intentions for both Korean and Chinese restaurants. The results showed that some of the DINESERV factors had a significant effect on customer satisfaction and revisit intentions for both types of restaurants. Furthermore, customer satisfaction was significantly related to revisit intention. The findings of this study may be useful in monitoring ethnic restaurants and developing marketing strategies for such restaurants to penetrate the ethnic restaurant markets in the United States.

I. Introduction

Many researchers have examined the relationships between the factors in the DINESERV questionnaire (i.e., food quality, service quality, atmosphere, convenience, and price and value) and customer satisfaction in the restaurant industry and have found that food and service quality significantly influence customer satisfaction (Ha and Jang, 2010, Kim et al., 2009, Chang et al., 2010). In addition, convenient location is an enticing element for groups who do not visit their favorite restaurants too often (Mattila, 2001). A physically relaxed and comfortable dining atmosphere is a relatively important factor that has a positive effect on customer satisfaction and revisit

intention (Liu and Jang, 2009a). Price and value is also crucial in helping determine how customers select restaurants and cuisines (Yuksel and Yuksel, 2002). All these DINESERV factors are important and related to each other and provide a quantitative method of measuring high or low levels of customer satisfaction and revisit intention in the restaurant sector.

Because the DINESERV factors serve as a standard to measure overall restaurant operations and customer perceptions, including customer satisfaction and revisit intention, they might be useful in evaluating and comparing food service operations between different countries. Using the same standard, the strengths and

weaknesses of two or more restaurants can be easily compared.

Previous studies pertinent to DINESERV dimensions have considered the quality of dining operations; environmental conditions, perceived value associated with customer satisfaction, revisit intention, and word-of-mouth in local and cultural restaurants (Chang et al., 2010, Kim et al., 2009, Stevens et al., 1995). However, no former research has compared the differences between ethnic restaurants using the DINESERV factors. This study examines Korean and Chinese restaurants in order to discover not only the differences between them and but also a way to strengthen and enhance the quality of Korean restaurants.

Ethnic restaurants in the United States have increased in popularity because of the large number of immigrants from a variety of racial and cultural backgrounds who have come to the country in the past few decades (Josiam and Monteiro, 2004). More than 90 percent of the American population has dined at a Chinese restaurant, indicating that Chinese food and restaurants have deeply penetrated the American culture (George, 2001). Conversely, Korean restaurants are not as popular as Chinese restaurants, and Americans are not nearly as familiar with Korean food. The reasons for the dissimilarities between Korean and Chinese restaurants may be numerous. This study examines the DINESERV factors to identify whether they influence American customers' dining experience and exclude any historical background and social recognition of ethnic restaurants. The results might be useful to not only discover empirical or theoretical information about the success of Chinese restaurants but also uncover tactical strategies to develop Korean restaurants in the United States.

Thus, the objectives of this study were (1) to examine the relative importance of DINESERV factors that influence customer satisfaction and revisit intention with regard to Korean and Chinese restaurants and (2) to examine the relationship between customer satisfaction and revisit intention for Korean and Chinese restaurants.

II. Literature Review

2.1. DINESERV Factors

Restaurant operators make use of the DINESERV factors to measure the overall quality of food and service operations as well as customer satisfaction in restaurants (Stevens et al., 1995). DINESERV is the overall quality measurement scale of a restaurant and combines both SERVQUAL and LODGSERV (Knuston et al., 1990, Patton et al., 1994). Parasuraman et al. (1988) suggested the use of SERVQUAL, a multiple-items scale that measures the service quality perceived by customers using five aspects: tangibles, reliability, responsiveness, assurance, and empathy. Nam and Lee (2011) modified the SERVQUAL scale, suggesting three dimensions of service quality: intangibles, tangibles, and food. They discovered that service quality has a significant effect on customer satisfaction in ethnic restaurants. Service quality includes multiple miscellaneous tangible and intangible items, making it a complicated factor to measure or calculate (Tsaur et al., 2002). In general, intangible items are difficult to measure. However, SERVQUAL is a well-known adequate measurement scale that helps restaurant managers and operators understand comprehensive service quality in the restaurant sector. Although service quality is extremely important for customer satisfaction and revisit intention, four other essential elements also influence customers' perceptions of a restaurant.

First, food quality is one of the most important determinants of customer satisfaction, revisit intention, and loyalty (Susskind and Chan, 2000; Namjung and Jang, 2007; Sulek and Hensley, 2004; Clark and Wood, 1999). Johns and Tyas (1996) suggested that food quality encompasses freshness, an appealing taste, appealing presentation, and menu item variety. They argued that food quality plays one of the most pivotal factors in enhancing customers' dining experience. In the case of Chinese restaurants, food quality is the most significant factor that affects customers' revisit

intentions, while cleanliness, value, price, and convenience are also valued (Qu, 1997). In a study of fast food restaurants, food quality is also critically important to help improve a restaurant's quality, value, and attractiveness (Pettijohn et al., 1997). Food quality is also regarded the most significant factor in determining whether customers will revisit a casual-dining restaurant (Mattila, 2001).

Second, atmosphere is another important factor in determining whether customers are satisfied with a restaurant. Heung and Ngai (2008) identified restaurant setting as playing a mediating role in strengthening the relationship between not only perceived value and customer loyalty but also customer satisfaction and customer loyalty for Chinese restaurants. This indicates that the environmental dining facility in ethnic restaurants is a persuasive and compelling factor for enhancing customer satisfaction. Kotler (1973) argued that, in some cases, an obvious and visually pleasing atmosphere can stimulate intense emotions for customers when making a purchase decision. He concluded that atmosphere is a significant marketing instrument that assists business interactions. According to Kotler, atmosphere is the "silent language" in business communication. Thus, the advantage of a pleasant atmosphere, which is the ideal place for business communication and interactions between customers and restaurant operators, is definitely one of the key tangible products in the restaurant sector.

Third, convenience is a relatively important determinant in the service sector. Convenience has the capability to minimize unpleasantness owing to long-distances or low accessibility to stores, which results in a sharp increase in non-monetary costs such as time, energy, and effort (Berry et al., 2002, Farquhar and Rowley, 2009). Berry et al. (2002) suggested in their study of the service industry that there are five types of convenience: (1) decision convenience, (2) access convenience, (3) transaction convenience, (4) benefit convenience, and (5) post-benefit convenience. Specifically, access convenience is one of the most significantly relative items among the five types of

convenience that restaurant owners and customers simultaneously consider.

Morris (1987) conducted a study to examine the importance of price differentials on the basis of the three aspects of price: managerial, legal, and ethical. The results of the study showed that price differentials for two or more values serve as a marketing tool and that managers are likely to adjust the price of a product in a specific situation. In the restaurant industry, price for value or value for price has also been discussed. Customers are attracted to a product advertised as having a low price but high value. According to the needs and wants of customers, low or high price and value is reasonably fair for them. In addition, the awareness levels and perceptions toward price and value of a product could be different depending on the status of customers. Thus, it is important to examine the overall quality of ethnic restaurants by using the factor of price and value. This discussion leads to the first two hypotheses:

Hypothesis 1. DINESERV factors have a significant effect on customer satisfaction with Korean restaurants.

Hypothesis 2. DINESERV factors have a significant effect on customer satisfaction with Chinese restaurants.

2.2. Customer Satisfaction and Revisit Intention

Customer satisfaction is defined as "the summary psychological state resulting when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience" (Oliver, 1981). The definition explains that the gap in customer satisfaction is the difference between actual customers' perceptions and a customer's expectations toward a product. Ha and Jang (2010) tested atmosphere as a mediating role that controls the relationship between service/food quality and customer satisfaction in ethnic restaurants, discovering that service and food quality positively influence customer satisfaction at significant levels. Many other studies pertinent to some of the

DINESERV factors and customer satisfaction have also discovered that service and food quality are strong predictors of customer satisfaction (Pettijohn et al., 1997, Oh, 2000). Furthermore, a comfortable and pleasant atmosphere with friendly service offered in a restaurant creates long-term retention and simultaneously enhances customer satisfaction (Liu and Jang, 2009b). In sum, customer satisfaction is significantly related to customer revisit intention, which results from a high level of atmosphere combined with a high level of service quality.

Previous studies have found that customer satisfaction is significantly related to the revisit intentions of customers. Stevens et al. (1995) found that revisit intention is positively affected by customers who are eager to experience the pleasant nature of a quality restaurant. Their study also found that customers are satisfied with high levels of service quality and that customer satisfaction results in an inclination for them to return to their favorite restaurant. Kivela et al. (1999) found that customers' behavior intention, including revisit intention and re-purchase intention, is significantly influenced by levels of customer satisfaction. Moreover, the findings of the study indicated that customer satisfaction is positively related to revisit intention in the restaurant sector. Other studies have also tested the relationship between customer satisfaction and revisit intention. The common finding is that customer satisfaction is significantly and positively related to revisit intention and repurchase intention in not only the service sectors, including the tourism and hospitality industries, but also other business industries (Soderlund and Ohman, 2005, Kivela et al., 1999, Cronin and Taylor, 1992).

Hypothesis 3. Customer satisfaction is significantly related to revisit intention for Korean restaurants.

Hypothesis 4. Customer satisfaction is significantly related to revisit intention for Chinese restaurants.

III. Research Design and Method

The survey questionnaire was composed of three sections. The first section comprised 24 assessment

items that are included among the DINESERV factors, such as service quality, food quality, atmosphere, convenience, and price and value. All assessment items of the DINESERV factors were adopted and modified to fit the study from previous SERVEQUAL, LODESERV, and DINESERV studies (Kim et al., 2009, Knuston et al., 1990, Patton et al., 1994, Heung et al., 2000, DeMoranville and Bienstock, 2003).

Participants were asked about service quality with nine assessment items: staff appearance, attentive staff, service provided by staff, staff's knowledge about food, friendliness of the dining manager, prompt service, food served as ordered, accurate guest check, and dependable and consistent service. Food quality was assessed using nine items: overall quality of food, taste of food, eye appeal of food, freshness of food, food safety, appropriate food temperature, food authenticity, variety of menu items, and healthy options. Atmosphere was assessed with eight items: cleanliness of facilities, dining room environment, level of comfort in the dining, appropriate room temperature, aroma, atmosphere authenticity, lighting, and interior design and décor. Convenience included two assessment items: convenient location and short walking distance. Price and value contained five assessment items: good value for the price, appropriate portion size, reasonable price item, overall value of dining experience, and fair price. The second section of the questionnaire was designed to inspect customer satisfaction and revisit intention regarding dining experience at Korean and Chinese restaurants. All items of the DINESERV factors, customer satisfaction, and revisit intention were measured using a 7-point Likert-type scale. The items were rated from 1 (very poor) to 7 (excellent). The third section was designed to solicit demographic information, which encompasses gender, age, and ethnicity. All the demographic information was measured using nominal scales.

The target population was American customers who have dined at Korean and Chinese restaurants in Hawaii. A total of 200 Americans were invited to participate in the survey from June 20 through June 27, 2011. A non-probability sampling method was used to

distribute the questionnaire to the target population. Among the non-probability sampling procedures, a convenience sampling method was employed to collect the data.

To test the proposed hypotheses empirically, various statistical methods were utilized. A pilot study was conducted to confirm the content validity and construct validity of the survey questionnaire. Within this pilot study, internal consistency reliability analysis was conducted using Cronbach's alpha to test the reliability of the questionnaire. Once the validity and reliability of the assessment items were proven, principal component analysis (PCA) and factor analysis were conducted to examine the importance of the DINESERV factors for Korean and Chinese restaurants. Then, multiple regression analysis was used to look for any significant relationships between the important DINESERV factors and customer satisfaction as well as customer satisfaction and revisit intention.

IV. Results

4.1. Characteristics of Respondents

Using a convenience sampling method, a total of 200 questionnaires were distributed to respondents in Hawaii. In all, 153 valid responses were collected, representing a response rate of 76.5 percent. Of these American respondents, 54.7 percent were male and 45.3 percent were female. In terms of ethnicity, 44.8 percent of the respondents were Caucasian. The other ethnic groups represented were Asian American (30.5%), African American (17.7%), and Native American (7.0%). The largest groups in terms of age in years were 30-39 (33.8%) and 20-29 (32.5%). The other age groups were 40-49 (16.6%), over 50 (9.1%), and under 19 (8.0%).

4.2. Factor Analysis

The DINESERVE factors were composed of 33 variables. Using a principal component analysis with the varimax (variance maximization) rotation procedure,

the key variables were found. In case of the Korean restaurants, 33 variables were reduced to five factors, which account for approximately 78 percent of the total variance. The communality of each variable was reasonably acceptable, ranging from 0.66 to 0.91. The Kaiser-Myer-Olkin measures of sampling adequacy score for factor analysis for the DINESERV factors was 0.935, which confirmed that the correlation matrix of the DINESERV factors was suitable for conducting factor analysis. Bartlett's test of sphericity χ^2 was 2276.935 at the observed significance level of alpha 0.001, indicating a high level of strength among the variables. Cronbach's alpha was 0.95 for service quality, 0.93 for atmosphere, 0.96 for price and value, 0.89 for food quality, and 0.90 for convenience. These values represent high levels of internal consistency of the measuring instruments (see Table 1). In the case of Chinese restaurants, 33 variables were reduced to four factors, explaining about 83 percent of the total variance. The communality of each variable was fairly acceptable, ranging from 0.76 to 0.90. The Kaiser-Myer-Olkin measure of sampling adequacy score for factor analysis for the DINESERV factors was 0.941 and Bartlett's test of sphericity χ^2 was 2725.283 at the observed significance level of alpha 0.001. Cronbach's alpha was 0.96 for atmosphere, 0.95 for food quality, 0.95 for price and value, and 0.95 for service quality (Table 2).

4.3. Multiple Regression Analysis

Correlation analysis was conducted to examine the relationship between each DINESERV factor and the relationship among the DINESERV factors, customer satisfaction, and revisit intention for Korean and Chinese restaurants. All the measures were positively related to each other, representing more than 50 percent of intercorrelations. In other words, DINESERV factors, customer satisfaction, and revisit intention are highly correlated. Next, multiple regression analysis was conducted to examine any significant relationships between not only the DINESERV factors and customer satisfaction but also customer satisfaction and revisit intention (Tables 3 and 4).

In case of Korean restaurants, the results of multiple regression analysis indicate that some of the DINESERV factors have a significant relationship with customer satisfaction, multiple $R = 0.86$. The adjusted R^2 is 0.73, suggesting that 73 percent of the variation in customer satisfaction can be explained by the five DINESERV factors. However, only price and value and food quality have a significant effect on customer satisfaction (Table 5). In case of Chinese restaurants, the results of multiple regression analysis indicate that some of the DINESERV factors have a significant relationship with customer satisfaction, multiple $R = 0.88$. The adjusted R^2 is 0.79, suggesting that 79 percent of the variation in customer satisfaction can be explained by the four DINESERV factors. However, only price and value and atmosphere have a significant effect on customer satisfaction (Table 6).

According to the results of the Pearson correlations, customer satisfaction in Korean restaurants is strongly and positively correlated with revisit intention (coefficient = 0.90, $p < 0.001$). In addition, customer satisfaction in Chinese restaurants is positively correlated with revisit intention (coefficient = 0.85, $p < 0.001$) (Table 7).

V. Conclusion and Implications

This study uses the DINESERV factors, which encompass food quality, service quality, atmosphere, price and value, and convenience to evaluate the overall performance including tangible and intangible products produced in the restaurant sector. Since a myriad of previous studies pertinent to the restaurant industry have been conducted, restaurant researchers and practitioners have a common sense that the DINESERV factors are excessively useful for examining multiple aspects of the restaurant operation. This study investigates two different ethnic restaurants using the DINESERV factors as a standard measuring instrument.

In the case of Korean restaurants in the United States, service quality is considered an important determinant for American customers. Customers may need assistance in Korean restaurants while dining on

Korean foods such as Korean barbecue, soup, salad, and any other side dishes. The style of eating Korean foods is different from the American dining style because chopsticks are used in Korean restaurants, and the manner of roasting meats is varied as well. In addition, foreign customers who have not experienced Korean foods may demand some explanation about Korean sauces, soups, and other side dishes because Korean foods are generally hot and spicy. American customers also consider the atmosphere of Korean restaurants to be an important element when dining. The atmosphere of ethnic restaurants is an important factor in foreign customers having a positive feeling and good first impression when entering ethnic restaurants. In general, customers who have not dined at ethnic restaurants may be curious and cautious when visiting such restaurants. Some Korean restaurants are set without chairs in the sitting areas; hence, it might be uncomfortable for Westerners who are used to chairs and tables. American customers also marked convenience as one of the important factors for them to dine at Korean restaurants. In case of Chinese restaurants, American customers do not prioritize convenience. This shows that the number of Korean restaurants in Hawaii is not comparable to that of Chinese restaurants. There are many Chinese restaurants not only in Hawaii but also in mainland United States. Thus, in contrast to Korean restaurants, American diners have ample access to Chinese restaurants, which can be found in many convenient locations, often within short walking distances. Close collaboration between the Korean government and Korean restaurant investors is a necessity in order to resolve the problems and difficulties that restrict the boundary of Korean restaurant markets in the United States.

Even if the five DINESERV factors were considered important by American customers, only price and value and food quality have a significant effect on customer satisfaction in Korea restaurants. The findings imply that American customers may have positive perceptions about Korean restaurants. Korean foods contain many vegetables and offer healthy side dishes, such that Korean foods are popularly known as

healthy meals. Appropriate portion size at a reasonable price is one of the attractive elements enhancing customer satisfaction. According to the result of the Pearson correlation, customer satisfaction and revisit intention are highly correlated with each other. This implies that American customers may tend to revisit as long as they are satisfied with Korean restaurants. On the basis of the findings of this study, price and value and food quality are the essential elements in strengthening Korean restaurants. In addition, Korean restaurants may be highly competitive in the United States because American customers are satisfied with the price and value and food quality of Korean restaurants. According to previous restaurant studies, these factors are key elements in prolonging the longevity of a restaurant. Restaurant owners and managers must also remember the importance of service quality, atmosphere, and convenience to tactically deal with Korean restaurant operations and performances in the United States.

This study examines Korean and Chinese restaurants simultaneously to discover the specific reasons that Chinese restaurants have successfully penetrated and prevailed in the American restaurant market. According to the results of this study, food quality, service quality, atmosphere, and price and value are recognized as important among American customers who have dined at Chinese restaurants. Convenience, however, is not among the factors considered especially important owing to the Chinese restaurants' deep penetration into the American marketplace. As indicated earlier, hundreds and thousands of Chinese restaurants are scattered across the United States, so that accessibility is not an issue for American customers. Even if the findings of this study indicated that food quality was not a factor significantly influencing customer satisfaction in Chinese restaurants, other studies pertinent to Chinese restaurants have already shown that food quality is one of the most important determinants influencing customer satisfaction. However, the results in this study indicate that only price and value and atmosphere had a significant effect on customer satisfaction for American customers dining

at Chinese restaurants. The detailed information in price and value involves overall value experience, good value for the price, reasonable price item, fair price, and appropriate portion size. In terms of atmosphere, American customers are satisfied with level of comfort, dining environment, appropriate room temperature, interior design, atmosphere authenticity, cleanliness, and lighting in Chinese restaurants. Chinese foods are basically diverse and very attractive, so that many other research articles support the fact that the food quality of Chinese restaurants is exceedingly recognizable even if the result of this study did not support this fact. However, according to the results of this study, price and value and atmosphere were significantly influential factors for American customers to be satisfied and revisit a restaurant. This implies that the owners and investors of Korean restaurants in the United States should consider atmospheric elements such as the design and decoration in Korean restaurants to enhance customer satisfaction. Ethnic restaurants are characterized by atypical food and atmosphere, which is what makes foreign customers want to visit such restaurants, enjoy the taste of different foods, and experience different cultures. Therefore, an important finding may be that atmosphere is one of the enticing elements enhancing the overall performance and satisfaction level of Korean restaurants for American customers. The findings brought to light the alarming fact that many Korean restaurants do not consider traditional decorations and interiors in their settings. Besides food quality and price and value, cultural and traditional facilities in dining environments may be an important appealing and pleasing factor enhancing customer satisfaction and the revisit intention of American customers for Korean restaurants.

VI. Limitations

The following suggestions indicate some additional and supplementary assignments for future research in order to reveal more reasonable findings. The limitation of this study is mostly relevant to sampling and data collection procedures. The survey questionnaire was

distributed to American customers who had dined at Korean and Chinese restaurants within one week; therefore, the sample size was relatively small. In addition, the data were collected in a specific limited area. Therefore, the findings may be difficult to generalize owing to the limited time that was available to conduct the survey and the restricted area, that is, Hawaii, instead of mainland United States. In order to discover more acceptable and reasonable findings, the sample size should be large and the survey questionnaire should be distributed across more states in the United States.

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Tables

Table 1. Factor Analysis for Korean Restaurants

Factor and Variables	Varimax rotated loading					Communality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
F1 – Service quality						
Serve food as ordered	0.72					0.83
Dependable service	0.72					0.72
Prompt service	0.72					0.76
Staff's knowledge about food	0.70					0.75
Accurate guest check	0.69					0.74
Friendly dining manager	0.68					0.73
Attentive staff	0.65					0.75
Staff appearance	0.61					0.66
Service provided by staff	0.60					0.72
F2 – Atmosphere						
Dining environment		0.78				0.81
Cleanliness of facilities		0.78				0.79
Level of comfort		0.77				0.74
Appropriate room temperature		0.73				0.76
Atmosphere authenticity		0.72				0.75
Interior design and décor		0.72				0.76
Lighting		0.65				0.70
F3 – Price and Value						
Fair price			0.84			0.91
Good value for the price			0.82			0.85
Reasonable price item			0.81			0.86
Appropriate portion size			0.77			0.88
Overall value experience			0.74			0.87
F4 – Food quality						
Food safety				0.73		0.81
Appropriate temperature				0.71		0.76
Taste of food				0.70		0.80
Eye appeal of the food				0.57		0.66
F5 – Convenience						
Convenient location					0.79	
Short walking distance					0.77	
Total variance explained						
% of variance explained	21.41	20.54	17.40	11.52	7.53	78.41
Cronbach's alpha	0.95	0.93	0.96	0.89	0.90	
Eigenvalue	5.78	5.54	4.70	3.11	2.03	

Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA): 0.935; Bartlett's Test of Sphericity, $\chi^2 = 2276.935$, significance at $p < 0.001$.

Table 2. Factor Analysis for Chinese Restaurants

Factor and Variables	Varimax rotated loading				Communality
	Factor 1	Factor 2	Factor 3	Factor 4	
F1 – Atmosphere					
Level of comfort	0.77				0.89
Dining environment	0.74				0.81
Appropriate room temperature	0.73				0.78
Interior design and décor	0.72				0.85
Atmosphere authenticity	0.68				0.77
Cleanliness of facilities	0.66				0.79
Lighting	0.66				0.82
F2 – Food quality					
Eye appeal of the food		0.78			0.79
Overall quality of the food		0.77			0.78
Freshness of the food		0.75			0.90
Food safety		0.70			0.82
Food authenticity		0.69			0.85
Appropriate room temperature		0.66			0.78
Taste		0.60			0.76
F3 – Price and Value					
Overall value experience			0.70		0.85
Good value for the price			0.68		0.82
Reasonable price item			0.67		0.86
Fair price			0.65		0.86
Appropriate portion size			0.62		0.82
F4 – Service quality					
Service provided by staff				0.74	0.86
Attentive staff				0.70	0.83
Staff appearance				0.67	0.88
Friendly dining manager				0.65	0.83
Staff's knowledge about food				0.60	0.80
Total variance explained					
% of variance explained	22.81	20.57	18.18	17.85	82.82
Cronbach's alpha	0.96	0.95	0.95	0.95	
Eigenvalue	5.75	5.60	4.26	4.25	

Note: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA): 0.941; Bartlett's Test of Sphericity, $\chi^2 = 2725.283$, significance at $p < 0.001$.

Table 3. Mean, Standard Deviation, and Intercorrelations of All Measures for Korean Restaurants

	Mean	SD	1	2	3	4	5	6	7
1. Service quality	5.00	1.15	1.00						
2. Atmosphere	5.15	1.01	0.75	1.00					
3. Price and Value	4.74	1.29	0.71	0.61	1.00				
4. Food quality	4.84	1.13	0.76	0.68	0.70	1.00			
5. Convenience	4.80	1.31	0.64	0.55	0.62	0.57	1.00		
6. Satisfaction	4.80	1.37	0.71	0.61	0.82	0.75	0.55	1.00	
7. Revisit intention	4.72	1.43	0.69	0.65	0.83	0.77	0.53	0.90	1.00

Table 4. Mean, Standard Deviation, and Intercorrelations of All Measures for Chinese Restaurants

	Mean	SD	1	2	3	4	5	6
1. Atmosphere	4.83	1.19	1.00					
2. Food quality	4.65	1.10	0.80	1.00				
3. Price and Value	4.81	1.14	0.84	0.83	1.00			
4. Service quality	4.64	1.17	0.83	0.81	0.84	1.00		
5. Satisfaction	4.86	1.22	0.79	0.71	0.88	0.73	1.00	
6. Revisit intention	4.84	1.18	0.81	0.76	0.84	0.70	0.85	1.00

Table 5. Determinants of Satisfaction for Korean Restaurants

Dependable variable	Customer satisfaction				
Independent variables	DINESERV factors				
Multiple <i>R</i>	0.86				
<i>R</i> ²	0.74				
Adjusted <i>R</i> ²	0.73				
Standard error	0.71				
<i>F</i>	46.42				
<i>N</i>	153				
Independent variable	<i>b</i>	Beta	<i>t</i>	Sig.	VIF
Constant	-0.26		-0.63	0.53	
Service quality	0.12	0.10	0.91	0.36	3.74
Atmosphere	0.01	0.01	0.13	0.89	2.52
Price and Value	0.60	0.57	6.35	0.00**	2.50
Food quality	0.35	0.29	3.09	0.00**	2.83
Convenience	-0.04	-0.04	-0.59	0.55	1.91

** *p*<0.001

Table 6. Determinants of Satisfaction for Chinese Restaurants

Dependable variable	Customer satisfaction				
Independent variables	DINESERV factors				
Multiple <i>R</i>	0.88				
<i>R</i> ²	0.80				
Adjusted <i>R</i> ²	0.79				
Standard error	0.55				
<i>F</i>	65.70				
<i>N</i>	153				
Independent variable	<i>b</i>	Beta	<i>t</i>	Sig.	VIF
Constant	0.29		0.97	0.32	
Atmosphere	0.26	0.26	2.21	0.03*	4.53
Food Quality	-0.12	-0.10	-0.98	0.32	4.02
Price and Value	0.92	0.86	6.87	0.00**	5.13
Service quality	-0.13	-0.12	-1.04	0.29	4.62

** *p*<0.001; * *p*<0.01

Table 7. Pearson correlations for customer satisfaction and revisit intention

Ethnic restaurants	Pairs	Coefficients	Cases	<i>p</i>
Korean restaurants	Customer satisfaction with revisit intention	0.90	153	0.000
Chinese restaurants	Customer satisfaction with revisit intention	0.85	153	0.000



Strategic Sourcing Patterns of Philippine Agribusiness and Multinational Enterprises

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ABSTRACT

This paper examined the strategic sourcing patterns of agribusiness and multinational enterprises in the Philippines and drew insights from an emerging market's perspective based on ten explorative case studies. Findings confirmed the extant literature relative to multinational enterprises not actively pursuing local sourcing options presented by their host country. Mango processing and export companies in the Philippines primarily sourced locally from multiple locations based on the seasonality of raw material supply. Some firms employed intra-sourcing in combination with external sourcing. A majority of the firms adopted sourcing strategies depending on export market specifications. In addition, foreign sourcing was still the predominant practice with imported supplies accounting for the bulk of the procurement operation due to low cost, high and consistent quality and volume flexibility considerations. Sourcing strategies employed by firms were more reactive rather than strategic. The results imply a lack of embeddedness of purchasing and supply management strategy in the overall corporate strategy of some Philippine agribusiness and multinational enterprises.

I. Introduction

Agribusiness has been known as the food provider of the world as this sector produces fresh agricultural food products and processed food produced by agro-industrial enterprises. Since agriculture is its biggest sector, agribusiness is characterized by raw materials that are perishable, variable in quality and seasonal. The long-term sustainability of agribusiness enterprises

relies on the availability, quality and cost of raw materials. Procuring raw materials accounts for a sizeable percentage of production and operational expenses and has implications for profitability. The changing natural environment and the increased competition for raw materials due to the fast growth of agro-industries have compelled agribusiness companies to think of more innovative and strategic ways to source their raw material requirements. In the past years,

various forms of strategic supplier alliances were developed to manage this impending concern. Agribusiness companies have to make strategic choices on how to sustain a supply of high quality raw materials at the lowest possible cost.

In the case of the Philippines, essentially an agricultural country, the raw material base for most agribusiness enterprises is shrinking not only because of the decreasing number of farms and decreasing farm sizes attributed to the comprehensive land reform program dating back to the 1970's and incongruent government-initiated economic policies but also because of climatic changes. Many companies cite a decreasing raw material supply as one important problem in agribusiness operations management. Availability of raw materials is only one of the pressing issues. The others are quality and cost. Raw material costs have continuously been on the rise during the past few years primarily due to increases in fuel and power consumption. It is therefore important that agribusiness companies incorporate strategic sourcing in planning for and managing the raw material supply.

All firms with varying scales of operation and asset sizes stand to benefit from strategic sourcing improvements. A benchmark study conducted in 2005 by Source One and the Aberdeen Group in the U.S. found that the typical mid-size enterprise applies disciplined sourcing methods to only a third of total expenditures. Most of these firms make use of ineffective, fragmented and predominantly manual methods to analyze spending, negotiate, collaborate, and manage suppliers. It is estimated that inadequate sourcing competencies are costing mid-size firms over \$134 billion in missed supply savings opportunities every year. Mid-size enterprises employing strategic sourcing techniques such as using standard sourcing procedures within the entire firm, hiring sourcing experts, utilizing spend analytics in managing expenditures, enlisting top management support and capitalizing on sourcing management automation, report a more than four-fold increase in procurement

cost savings, better supply management performance, and higher profitability than industry peers.

This paper attempts to add to the limited literature on strategic sourcing relative to emerging markets in Southeast Asia such as the Philippines as well as provide insights on the strategic sourcing patterns of agribusiness and multinational enterprises (MNEs) or multinational corporations (MNCs). Deresky (2006) defines an MNE or MNC as "a corporation that engages in production or service activities through its own affiliates in several countries, maintains control over the policies of these affiliates, and manages from a global perspective."

After the introductory section, a review of strategic and worldwide sourcing literature are presented followed by explorative case studies of agribusiness and MNEs in the Philippines emphasizing their sourcing practices, issues, constraints and opportunities, an analysis and integration of findings and a summary of implications that may be relevant for policy-making and agribusiness industry stakeholders.

II. Review of Literature

Strategic Sourcing and Procurement

According to Sollish and Semanik (2011), sourcing has always been a purchasing and supply management function which traditionally has been recognized as locating and transacting with suppliers. Different organizations and academics usually define this process in various ways when managing their supply chains. Strategic sourcing, as defined by Sollish and Semanik, is "an organizational procurement and supply management process used to locate, develop, qualify and employ suppliers that add maximum value to the buyer's products or services." The major goal of strategic sourcing is to tap supplier entities that match strategic business and operational objectives of the organization. Being "strategic" in this sense refers to

many sourcing programs in need of long-term planning as these relate to supply chain action.

Strategic sourcing thus goes beyond the reactive role of addressing supply shortages or requirements in anticipation of production activities. The Chartered Institute of Purchasing & Supply (CIPS) states that strategic sourcing deals with “satisfying an organisation’s needs from markets via the proactive and planned analysis of supply markets and the selection of suppliers, with the objective of delivering solutions to meet pre-determined and agreed organisational needs.” In the purchasing and supply management (P & SM) model developed by CIPS, strategic sourcing is embedded in a firm’s overall strategy (CIPS, 2011).

Distinctions have to be made between sourcing, procurement and purchasing. Sollish and Semanik (2011) distinguish sourcing from procurement by explaining that sourcing has a longer range strategic role while procurement is more tactical in nature which specifically delves with overseeing the daily logistics operations relative to the supply base. Purchasing is another term used interchangeably with procurement. According to Krajewski et al. (2007), purchasing is “the activity that decides which suppliers to use, negotiates contracts and determines whether to buy locally.” Russell and Taylor (2009) define procurement as purchasing goods and services from suppliers.

Global Strategic Sourcing as a Competitive Advantage

Trent and Monczka (2003) cited a study on U.S. firms which discovered that such firms did not capitalize on the potential benefits offered by higher-level global sourcing. These firms concentrated on occasional cost-cutting activities, typically following a reactive approach to international purchasing by focusing on a search for the lowest-priced sources of supply.

There is increasing evidence that a corporation is much defined by its purchases and is benefitted by a close partnership with suppliers. This supports the

assertion that the sourcing decision figures prominently in a firm’s growth and profit picture (Su, et al., 2009).

Types of Sourcing Strategies and Patterns

Past researchers have mentioned various sourcing strategies and identified many types according to the focal point of their respective studies. When referring to the locational aspect of a global sourcing strategy, a sourcing strategy may be domestic (local) and/or foreign (global). Another way of categorizing this can be in terms of the ownership aspect which includes internal (intra) and external (inter) sourcing (Kotabe & Murray, 2004).

Zeng (2000) mentioned four categories of sourcing alternatives: (1) multiple sourcing, (2) single sourcing, (3) single/dual hybrid or network sourcing, and (4) global sourcing.

According to Tavares and Young (2006), economic integration (along with age of subsidiary) has a significant impact on sourcing patterns. This means that subsidiaries established after their host countries’ European Union (EU) accessions are less embedded in terms of sourcing. In addition, subsidiaries in global industries buy less domestically, as well as subsidiaries located in small EU economies. No significant association was found relative to subsidiary size, home country and entry mode with the import propensity of the multinational subsidiaries surveyed. Their study results confirm the significant body of evidence that multinational firms rarely develop extensive input linkages with their host economy. Thus the effectiveness of traditional criteria for investment attraction is doubtful with the potential for stimulating local sourcing viewed as weak.

Global sourcing strategy supports the company strategy to enable companies to be dominant and competitive players in the global economy. Patterns, trends and issues emerging from the preference of sourcing may indirectly address the participation of local companies as suppliers to foreign MNCs. Types

of sourcing strategies may be a combination of both locational and ownership aspects: (1) intra-domestic, (2) intra-foreign, (3) inter-domestic, and (4) inter-foreign. (Shariff, 2007)

Strategic Sourcing and Supply Chain Management

With the trend towards global sourcing, many firms are now recognizing the increased level of supply chain risk that exists in these global distribution channels. While global sourcing provides many benefits such as lower price and expanded market access, manufacturing and customer service executives are aware that there is a need for supply chain risk management, just as they must manage other risks that affect business performance. Supply chain disruptions such as industrial plant fires, transportation delays, work slowdowns or stoppages and natural disasters can occur any time. Companies running lean operations become vulnerable to wide-scale network disruptions brought about by raw material flow problems (Elkins et al.). This proves that strategic sourcing is not merely the concern of the upstream players but is dependent on the actions of downstream players and external business events.

In a paper prepared by McNamara et al., it was stated that strategic sourcing and supply management afford managers one of the powerful opportunities to extract cash benefits from the value chain and set the stage for continued product and service innovation and growth. However, companies must select the right people to make the sourcing decisions. “Leadership insight and skill are critical for shaping and managing the complexities of any business process, but especially sourcing strategies — both internally *and* with sourcing partners.”

III. Sourcing Practices and Patterns of Philippine Agribusiness and Multinational Enterprises

Several explorative cases are presented to highlight the strategic sourcing practices and patterns of selected Philippine agribusiness and multinational enterprises which agreed to be interviewed. The names of the companies have been disguised upon the request of the executives. Additional information was provided by secondary sources.

Case 1: Mango Delights Company

One of the important players in the Philippine mango industry, based in the island of Cebu in the Visayas region, was established in 1972. From this time on, several products have already been developed and the company was able to penetrate the export market. There was a considerably good demand for processed mangoes in the international market. Their main product is dried mangoes, 60-70% of which is exported.

The company has regular suppliers of fresh mangoes from different provinces in the country. They have buying stations in several provinces of Mindanao. Their biggest source of mangoes is Davao in Mindanao. They also source from Manila. Aside from these suppliers, the company is also managing a farm planted with 2000 mango trees. There is no existing contract between the suppliers and the company, but since they have already established long-term relationships with these suppliers, they regularly deliver to the company.

One of the important problems of the industry is the lack of supply of raw materials, particularly during the off-season or lean months. This is not only due to the lack of produce but also to the presence of pests and diseases which consequently affect the quality and volume of the produce. The plant’s capacity is 90 tons every day but during the off-season, the main plant receives only 40 tons every three or four days. Their farm can only supply three percent of the total requirement of the plant since not all trees are fruiting at the same time. This lack of raw materials has resulted in under filled shipments to buyers. In addition, the company is not able to take advantage of increased opportunities in the export market.

Case 2: Super Sweet Mango Corporation

Super Sweet Mango Corporation is one of the successful and dominant companies in the mango export and processing business. This company is considered a pioneer in the Philippine mango industry. Based in Metro Manila, it has been exporting fresh mangoes and processed mango products to various countries for 25 years. Fresh mangoes are exported to Japan, frozen mangoes to Europe, sweetened mango puree to Hong Kong, frozen mango puree to Korea and dried mangoes to the United States.

Sourcing fresh mangoes to be used as raw materials is considered a challenge because of availability and quality requirements. Japan, its main market, has very stringent requirements as they require very low maximum residue limits. They also require vapor heat treatment to prevent fruit fly infestation as well as mangoes that exhibit good, physical quality as indicated by smooth skin, no bruises and no mechanical damage. There is a big variability in the supply of mangoes with a huge supply during the peak season and limited supply during the lean season. During peak season, the company can handle and process 60-100 tons of mangoes, while during off season, they can only process 20 tons. Adjustments in the manufacturing are done to deal with the variability in supply volume.

The company manages its raw material supply by accrediting suppliers from all over the Philippines. Accredited suppliers are supported by the company through provisions of input supplies like paper bags which are used in bagging mangoes. The role of accredited suppliers is to provide labor in the mango plantation. These accredited suppliers are regularly visited by contracted project managers and technicians of the company. They make sure that the suppliers adopt good agricultural practices (GAP) to ensure quality and traceability of the mangoes supplied to the processing plant. Each accredited supply is assigned a source code for easier traceability. The company has been requiring that the accredited suppliers practice

good agricultural practices for the past 10 years. They want their mangoes not only of good physical or visual quality but also safe to consume by their buyers/end-users. Sourcing from different parts of the country enables the company to manage supply volume as planting and harvesting times vary in the different mango producing areas. The northern part of Luzon is the best source of fresh mangoes during the months of February and March. In May and June, the mango supply is sourced from southern Luzon and during the off-season, mangoes are procured from Mindanao.

One of the issues faced by the company is that while their accredited farms are practicing GAP, the neighboring farms are not. This makes it difficult for them to ensure that the mangoes produced in their accredited farms are within maximum residue limits. Currently, they are faced with volume decreases in fresh produce exports to Japan due to issues with maximum residue limits. The other players in fresh produce mango exports also experience this problem. One advantage of this company is that they are also into processing mango products using their state-of-the-art processing facility. If the supplied mango did not pass the requirements for a fresh produce export, they can still use this for other products of the company. Another issue faced by the company is that some accredited growers practice pole vaulting (with some growers previously committed to sell to the company opting to sell their produce to other buyers instead of the company) resulting in unanticipated decreases in the supplied volume.

Case 3: Paramount Mango Products, Inc.

Paramount Mango Products, Inc. is one of the top players in the fresh mango export industry in the Philippines. The company has been in existence for 23 years and has an estimated 35% market share of the fresh mango exports in the country. Based in Metro Manila, this firm is Japanese-owned and it exports around 90% of its volume to Japan. They also export to Hong Kong, Korea, the Middle East and Europe.

Raw fresh mangoes are sourced from accredited contract growers, contract sprayers and consolidators. An important part of accreditation is the chemical used in spraying. The suppliers should only use chemicals that are allowed by the Fertilizer and Pesticide Authority (FPA). They should also adopt the proper spraying schedule. For accreditation, assigned company personnel go to the farm, identify the chemicals being used and determine whether these conform to the maximum residue limits. They also get samples of mangoes and have these tested for residues in the laboratory. Although the mangoes are sourced from accredited suppliers, the mangoes supplied to the company after each harvest are still visually inspected and subject to testing for chemicals.

The company sources mangoes from all over the Philippines. They get mangoes from the provinces of Luzon such as Zambales, Pangasinan and Tarlac during the Luzon season, which starts in February and ends in June. During the other months, they purchase mangoes from Cebu, Bohol and Dumaguete in the Visayas region and Davao in the Mindanao region. The company used to support mango growers by providing them inputs but they withdrew this support because the company incurred losses.

The treatment undertaken by the company for fresh mangoes depends on where the produce is to be exported. Vapor Heat Treatment (VHT) is required by Japan, Korea, China and New Zealand and the U.S. VHT is done for fruit fly prevention.

Two raw material supply-related issues were identified by the company. One of these is the chemical contamination by the other nearby farms. They cannot control the type of chemicals used by other farms. If the chemicals used by nearby farms do not conform to the specification of chemicals allowed for mangoes or the chemicals used in these farms are banned chemicals, the produce of their accredited farms will also be affected. To manage this, they consider location as one of the criteria for accreditation. They do not accredit mango

farms near rice fields because rice farming heavily utilizes chemicals. Another issue is the very high reject rate of fresh mangoes supplied to the company. Since most of the mangoes handled by the company go to Japan, these are subject to stringent quality requirements. These mangoes should pass both the visual and chemical tests. What the company often experiences is that if one million kilos are to be shipped out, they need two million kilos fresh mangoes so that they can be assured of the best quality.

Case 4: Coconut King Philippines, Inc.

Coconut King Philippines, Inc. (CKPI) is one of the largest producers of desiccated, processed and value-added coconut products in the Philippines. The products that they produce have a wide variety of applications in the food processing industry such as baked goods, confections, dairy, savory, cereals, coatings, and beverages, among others.

The company traces its roots way back to 1895 when Coconut King Corporation was established in the U.S. In 1922, the company pioneered desiccated coconut manufacturing at its first site in Manila and eventually the production facility was transferred to its current Laguna location in 1927. The facility was damaged during World War II but rebuilt in 1947.

CKPI currently exports its products to the U.S. and the U.K. Its production capacity is 300 tons per day of nuts. The company can produce 80 thousand pounds of white desiccated coconuts per day and 40 thousand pounds of brown flavored desiccated coconuts per day. It has 50 regular workers and 1200 outsourced employees. The company is situated in a two-hectare land area in San Pablo City, Laguna, one of the progressive provinces south of Manila.

The company sources its coconuts from the country's provinces including the surrounding provinces of Batangas, Quezon and Bicol in the Luzon region. As a strategic move, the company also established another plant in Davao del Sur in Mindanao

in 1968. Coconuts in Luzon are prone to typhoons, particularly the Bicol region, which is oftentimes visited by strong typhoons. If the supply of coconuts in Luzon is low, the company gets coconuts from Davao which is also an abundant supplier of coconuts.

Other input requirements of the company, like sugar, are imported. Buying countries specify their requirements for sugar and this is used by the company as a basis for purchasing this material.

Case 5: GS Philippines, Inc.

Global Seasonings Corporation is a century-old multinational company with its headquarters in Japan but with an affiliate operating in the Philippines since 1958. Aside from the Philippines, this company is also operating in 22 other countries and has 26,000 employees worldwide. All in all, the company has 100 factories. The Philippine company is called GS Philippines, Inc. which is engaged in supplying quality food and seasoning products in the Philippines made by international affiliates and local toll manufacturers using Global Seasonings Corporation's license, quality standards and technical prowess. In the early years of its operations, the company used cassava starch as its main ingredients in the manufacture of monosodium glutamate, its major product. It then shifted to the use of sugarcane molasses as a major raw material. In an interview with the president of the company, it was found that the company is no longer manufacturing monosodium glutamate in the Philippines because of the problems in the local sugar and sugarcane industry resulting in a substantial drop in the supply of sugarcane molasses, which is a critical ingredient in monosodium glutamate manufacturing. Currently, GS Philippines, Inc. is importing monosodium glutamate from Brazil, which is a big sugarcane-producing country. Other ingredients are imported from affiliates in other countries. Presently, the Philippine plant is mainly involved in toll manufacturing and sales. It has sales stations in the three main islands of the Philippines and has three toll manufacturers with two located in Luzon and one in the Visayas region. The company is toll

processing and selling industrial food ingredient products such as bulk MSG, Aji-tide nucleotides, bulk Aspartame and Tencho, food service products such as flavor seasoning mix, breading mix, all purpose breading mix, seasoning mix, sinigang seasoning mix, fruit juice drink mix and calorie free sweetener.

Case 6: Prime Probiotics Philippines, Inc.

Established in 1978, Prime Probiotics Philippines, Inc. is another multinational company located in the Philippines. The company has been producing only one product, a probiotic drink, which was developed by its parent company, Prime Probiotics Corporation, in 1930. Since the successful founding of a special strain in a probiotic drink, the company has started operating in other Asian countries, the United States and Europe. The company was the first to introduce probiotic drinks in the Philippines. From the year 2000 to 2009, production has been on an uptrend from 526,140 to 1.482M 80 ml bottles produced on average per day. After the factory renovation in early 2011, production increased to 1.56M 80 ml. bottles. The product is made of sugar, skim milk, water, natural flavorings and live lactobacilli of the *shirota* strain. Of these ingredients, only water and sugar are sourced locally. Skim milk is sourced from Australia and New Zealand and a viable cell and mother starter is imported from the mother company in Japan. This material sourcing system has been in place since the company started in the country over 30 years ago.

Case 7: Worldwide Fresh Commodities, Inc.

Worldwide Fresh Commodities, Inc. (WFCI) is the Philippine affiliate of Worldwide Foods Corporation (WFC), a multinational company established in 1901 in Hawaii, U.S.A. WFC pioneered pineapple growing and canning in the area and has since expanded to 90 countries.

Established in 1963 in South Cotabato in the Mindanao region, WFCI is known as a major producer of fresh and canned pineapples as well as bananas. It

supplies up to 63% of Japan's annual pineapple demand and exports to other countries as well. Its pineapple plantation spans 24,000 acres. Besides pineapples and bananas, WFCI set up another division known as WFCI Ultra-Fresh Produce to offer other fresh produce to its customers such as fresh asparagus, anthurium cutflowers, leatherleaf fern and solo papaya. Specifically, as mentioned by Vellema (1999), for its fresh asparagus operations, WFCI Ultra-Fresh Produce hatched a contract growing scheme and linked with 6,800 small and medium scale farmers to address its problem with land availability. At the onset of the asparagus contract farming scheme, the company believed that financial control, prescriptive farming practices and agronomic research would be sufficient to guarantee a stable supply of asparagus and simultaneously maintain the profitability of the contract farming scheme. However, along the way management encountered difficulties managing the diversity of farming and labor practices on the farms. Such diversity issues included variability in farm size, labor management by the grower, sharing of farm income with workers, and technical skills of grower and laborers. The formal arrangement could control field activities and financial flows only to a limited extent. When the company became aware of rising production costs, lowering productivity and decreasing profitability, management decided to take a more interventionist approach, shifting its attention away from farming and becoming engaged instead in global sourcing, for which a steady supply of high-quality commodities is needed.

Case 8: Premium Biscuits and Noodles Company

Premium Biscuits and Noodles Company is recognized as one of the top 100 Philippine companies engaged in manufacturing 40 variants of biscuits and 28 variants of noodles since 1980. Major production hubs which are ISO 9001-2000 certified and halal accredited are located in Laguna, Rizal and Cebu. Export markets include 40 countries in Asia-Pacific, Australia, Africa, the Middle East, Europe and North America. The company was able to take advantage of the changes in

food consumption habits of Filipinos all over the world. There has been a growing demand for convenience products like biscuits and instant noodles in the Philippines. The company has its own flour milling plant to meet the requirements of their flour-based products. Wheat is a major raw material which is imported. With climatic changes such as a drought that hit the U.S., Canada and Australia, which are the major suppliers of good quality wheat in the Philippines, the company is facing a potential problem of a decrease in the supply of wheat for their production requirements. Aside from wheat, most of the other ingredients are likewise imported primarily due to low-cost sourcing from other countries. Milk powder is sourced from Australia and the United States, and flavorings from Singapore and Europe. Salt, shortening and sugar are locally sourced. However, the increasing cost of raw materials and other ingredients is an international phenomenon. According to the quality assurance officer, they tried to substitute wheat to cut back on procurement cost, but the company received complaints from consumers about the unacceptable taste of its products that utilized the wheat substitute; hence, this practice was discontinued.

Case 9: Nutri-Watch Philippines, Inc.

Nutri-Watch Philippines, Inc. (NWPI) is the Philippine affiliate to Nutri-Watch International (NWI), the world's leading nutrition, health and wellness company based in Switzerland and founded in 1866. NWI posted total sales of CHF 110 billion for 2010 and maintains operations in 115 countries.

NWPI manufactures over 60 brands of dairy health and nutrition, coffee, beverages, liquid beverages and dairy culinary, food, ice cream, chilled dairy, food flavoring, breakfast cereals, confectionery, infant nutrition, pet food, healthcare nutrition and culinary products.

Specifically, in NWPI's coffee business unit, coffee beans are sourced from 30,000 farmers through eight strategically-located buying stations in Luzon, Visayas

and Mindanao. Like its parent company, NWPI advocates the Sustainable Agriculture Initiative (SAI) platform for sustainable and efficient coffee farming in the Philippines by showcasing its own demonstration farm in Mindanao. However, locally-sourced coffee beans comprise only 30% of its coffee bean requirement for its Mindanao-based coffee processing facility primarily due to lack of good quality coffee beans. A majority of NWPI's coffee bean requirement, about 70%, is still imported. The proportion of this sourcing pattern will depend on how its supply chain management group analyzes current world coffee prices and local coffee bean supply volumes as well as quality. If the Brazil coffee crop is hit by frost causing world coffee prices to soar, NWPI usually steps up its local sourcing procurement efforts.

Case 10: Viva Filipinas Corporation

Viva Filipinas Corporation is a Filipino multinational conglomerate known globally as a leader in the Philippine food and beverage industry since 1890 when Southeast Asia's first brewery was established. Besides local manufacturing facilities which churn out 400 products ranging from beer, hard liquor, juices, basic and processed meat, poultry, dairy products, condiments, coffee, flour, animal feeds and various packaging products, company operations extend to other countries such as Hong Kong, China, Indonesia, Vietnam, Thailand and Malaysia. Recently, the conglomerate has branched out into other business sectors such as telecommunications, mining and property development. Net income for 2010 totaled Php 20 billion (\$460 million).

Specifically, the feed business unit sources its main yellow corn requirements from abroad due to low-cost considerations, stable quality and sufficient and available quantities.

IV. Case Insights

The preceding section showed ten cases of Philippine agribusiness and MNEs relative to their sourcing practices. Insights that can be drawn from such cases follow:

1. **Local Multiple Sourcing Relative to Seasonality.** Cases 1, 2 and 3 were all mango companies that all sourced locally through their network of contacts. During the Luzon dry season, these firms sourced from provinces within Luzon such as Zambales and during the off-season, these firms procured their fresh mango requirements from the Visayas and Mindanao regions where mangoes are available all year-round. Such a sourcing pattern is borne out of weather patterns where during the Luzon dry season the mango supply is abundant and processing requirements are met. However, during the off-season, supply shortages are common thus limiting processing capacities and delivered volumes.
2. **Intra-Sourcing in Combination with External Sourcing.** Most companies utilizing fresh crops as raw materials or final products made use of intra-sourcing in combination with local and global external sourcing. Intra-sourcing refers to farm production sites maintained by some of the companies studied. This was observed in Cases 1, 2 and 9.
3. **Sourcing Based on Export Market Specifications.** In the case of specific export markets which spell out product specifications such as those for Philippine mangoes, strategic sourcing strategies and patterns adopted would depend on these specifications. Japan prescribes stringent quality specifications for mangoes that include the use of vapor heat treatment, excellent physical appearance of the product with no mechanical damage or bruising, and observance of maximum residue limits. Companies dealing with Japan source from areas that meet these specifications or procure their requirements from where their export markets say they should undertake their procurement activities (e.g. procurement of packaging materials from Japan). This practice was evident in Cases 1, 2, 3, 4 and 6.
4. **Sourcing Based on Low-Cost, High and Consistent Quality, Volume Flexibility Considerations.** Prudent supply chain management dictates that managing the

purchasing function with the least use of resources redounds to a healthier financial picture. Cases 5, 7, 8, 9 and 10 showed this tendency. It was observed that companies with large volume requirements exhibited this sourcing pattern. Global sourcing is the usual pattern undertaken by these companies on account of competitiveness in terms of cost, quality and flexibility.

5. **Foreign Sourcing as the Predominant Practice.** A majority of the companies studied (except for Cases 1, 2 and 3) sourced the bulk of their raw material requirements from abroad. Philippine agribusiness upstream players (suppliers) often times cannot meet volume requirements on account of fragmented production areas and high transportation costs. The only time this may not be observed is when the world supply is affected by extraneous events such as adverse weather conditions abroad (e.g. frost in Brazil affecting coffee production).
6. **Sourcing Practices More Reactive, Rather Than Strategic.** A common thread among the company cases studied is the fact that sourcing patterns reflected a more reactive stance rather than the observance of the strategic sourcing process in which purchasing and supply management strategies are embedded in the overall corporate strategy.

V. Conclusion and Implications

Strategic sourcing in agribusiness has been considered as a tough challenge. Although raw materials are available all over Asia, it should be recognized that producers are users too and a large percentage of outputs are locally used for value-adding activities. Aside from this, there have been increases in costs of raw material procurement and this is considered an international phenomenon. Another phenomenon which further complicates the situation is the biological nature of agricultural production. Agribusiness companies, whether multinational and local, have to deal with the biological conditions of their raw material sources. Wheat, which is the best ingredient for flour, for example, is not grown in the Philippines because the

Philippine production condition does not favor good wheat production. The climatic endowments of each country dictate to a large extent whether an agribusiness company should locally source or import their raw material needs. Another factor of importance to strategic sourcing is the quality requirements of markets. This validated the earlier research which stated that strategic sourcing is not simply raw material sourcing but also deciding on and responding to market requirements. The cases under study presented how different companies source their raw materials and supplies given the production conditions and the market specifications.

Mango companies utilized local multiple sourcing for fresh mango requirements on account of seasonality. Philippine agribusiness and MNEs which cater to dominant export markets adopt sourcing strategies based on what these export markets require. Firms with large volume requirements managed their supply chains so as to capitalize on low-cost, high and consistent quality and volume flexibility considerations. This latter observation is consistent with the literature on spend analytics, supply management and the strategic sourcing process.

Findings likewise confirmed what were stated in past strategic and worldwide sourcing literature about MNEs not actively utilizing local sourcing in their host countries. Foreign sourcing was still widely practiced as companies matched demand management activities with supply management initiatives. The sourcing patterns of firms likewise appear to be more reactive rather than strategic. This implies the need for purchasing and supply management strategy to be more embedded in the overall corporate strategy.

Finally, company executives will now have to be more vigilant than ever given the unpredictable nature of the business environment. Strategic sourcing patterns are bound to change once again considering the erratic trend of fuel and energy availability, climate change affecting agribusiness activities and the growing

movement towards sustainability. An in-depth study of sourcing patterns of the subject agribusiness companies would have to be done to be able to design a strategic sourcing model for each company.

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Technology Usage Diffusion and Business Diffusion to Avoid the Uncertainty of Technical Usage

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ABSTRACT

Expected use of technology that we have accumulated over the years is an important issue for firms. It determines the success or failure and seems to be compatible with shorter life-cycle support for the uncertainty of technical applications. The progress of digital technology and market diversification in recent years, in an environment where the shortened life cycle of business services and products where technology firms use the expected value of the sum (for technology), means technology is inevitably relatively undervalued. In this study, focused on a Fujifilm Case and the analysis of new entrants and new business in the shrinking film business as a response to the changing needs of film with the advent of digital cameras. Thus, considering a firm's management for its assessment of value of the use of technology is vital.

I. Introduction

Product life cycle and business life cycles are getting shorter and market diversification through the development of emerging economies and development of digital¹ technology is increasing. In addition, firms are turning their eyes to the selection and concentration

(NIKKEI BUSINESS, 2010a:p.53; NIKKEI Electronics , 2010:p.116) of new products through changes in production activities (NIKKEI BUSINESS, 2010b) and the vicious circle resulting from the recession (Harvard Business Review, 2009:p.113)
². Through this selection and concentration, resulting

¹ The customer needs have characteristic will change over time. Then the change interval is shorter, with the development of the information society. Thus, the shortening product life cycles (KONNO , 2007).

² The recession has firms often decide to withdraw as result of reviewing the operations of manufacturing base. However, the withdrawal might cause further

business and technology sold will be decreased. However, this sometimes comes at the cost of a negative effect on competitive advantages of their business by others that are used in business, and technology is to be sold after these drops. These problems are thought to be derived from uncertainty involved in the choice of utilization (this study will call this "technology usage") that technology firms have. This situation has arisen after a great value to produce the business and technology investments through targeted reduction. By the required sale and disposal by other techniques, more powerful technology will be developed or be evaluated though a relatively low value of technology usage that will be expected when considering the firm environment, even though the results have time to bear fruit for many years from firm R & D spending input. This is greater uncertainty regarding the assessment the value of technology usage. To determine perspectives for the utilization of the accumulated technology has important implications for firms. There seems to be determining a success or failure response to the short business and technology life cycle that has enabled uncertainty for a firm's technology usage.

II. Efforts to Maintain Business Sustainability

Incidentally, shorter product life cycles and product commoditization improves needs for strategic R & D activities of a firm. Shorter product life cycles reduce profits from their investments by shortening the period to recover costs submitted for product development and production. In addition, commoditization of products reduces value of products for the customer. For that reason, firms lose motivation to provide better performance products and services. Therefore, shorter product life cycles and changes in an increasingly commoditized business environment are considered to be a stringent environment for the development of products and services in firms.

III. Efforts to Develop New Products and Services

A firm should be able to perform research and development on sustainable products and services to improve quality and performance of new products and services. In such research and development, the firm is required to develop new products and services that distinguish it from existing products. The reason is stuck in the commoditization of products from research and development and only the improvement of performance and quality. Therefore it is necessary to consider unmet customer needs, then to develop new products and services to satisfy them (Kusunoki, 2010:p.38). However, the development of new products that are distinguished from existing products and services, or the introduction of R & D resources to improve performance of existing products, requires many inputs of R & D resources. When a firm develops new products and new markets, there is no accumulation of a past technical base and knowledge about customer needs the firm owns, which creates higher uncertainty. Regarding uncertainty, Hugh *et al.*(1997) argues uncertainty can be reduced and the own need to avoid uncertainty.

IV. Uncertainty in Technology Usage and its Avoidance

R & D has uncertainties about the technology and usage (Miyazaki, 2007; Shibata, 2008): Uncertainty surrounding the technology, the uncertainty caused by an affected by level of science being developed by the technology itself, and limited attempts to respond a range of technology needs (Koyama, 1989). A firm attempts to develop technologies that satisfy the expected needs, but the technology developed can be assumed in advance to meet the need. Then, a firm can

depression by worsen the region economy (Kathryn and Michael, 2009)

chose parallel development of multiple technologies (technology-diffusion) in some technical-usage (usage-aggregation). Firms try to avoid uncertainty by developing several technologies, and why technology to screen seems to be higher in feasibility of use. In this study, this avoidance behavior is called "Diffusion technology and Aggregation usage".

On the other hand, the uncertainty surrounding usage is uncertainty about whether that is actually used in usage of technology. The developed technology must be used for products and services. Firms are trying to avoid uncertainty about the application by identifying and developing technology (Technology -aggregation), where the application of technology is widely assumed (Usage-diffusion) by expanding the availability of technology. In this study, this avoidance behavior is called "Aggregation technology and Diffusion usage".

To avoid the uncertainty involved in technology and usage, diffusion technology and diffusion usage are considered to cause a large cost exchange by applying a wide range of applications of many technologies. If a firm needs technology development by economic rationality, it's difficult for technology and usage to avoid uncertainty. (Fujimatu, 2005).

V. Uncertainty in Business and Avoidance

Firm should also avoid uncertainty in the business as well as avoid the technical uncertainties (Ito, 2005). A firm's business behavior, the greater part of the technology that is determined under the influence of a surrounding social environment of customer needs and market it more independently. Uncertainty surrounding a social environmental and customer needs is based on the uncertainty of their mobility. This is uncertainty that suddenly appears or disappears caused by changes society environmental. To avoid this uncertainty, two

behaviors are considered. Take actions of selection and focus or truncate a non-profit division, or take action to diversify markets to find a profitable market. This behavior of selection and focus is difficult to adopt because it can cause a negative-cycle³. In order to avoid uncertainty in a firm's business, diversification is considered. In other words, firms are performing diversification to preparation for changes in the market. This behavior is to try to respond to changes by increasing versatility. A market is formed by combining its products and services to meet the needs and request of customer needs⁴. A firm can increase versatility of the market, diversify usage of customer needs and the firm. At that time, firm are considered to take an avoidance behavior either "Search-demand and Intensive- usage" (trying to match specific technology usage for multiple customer needs) or "Specific-needs and Diffusion-usage" (exploratory usage development to satisfy specific needs).

VI. Strategies Consistent of Business Strategy and R & D Strategy in Order to Avoid Uncertainty

In R&D and business are closely related (Ito, 2000), and shall be consistent with their strategic direction. R & D departments of a firm are present in the firm for developing products and services for use in future business. Business strategy, in order to sustain and develop long-term firm, indicates the direction of such standards and business development in the firm's business decisions. On other hand, R & D, there is a trend towards the diffusion of its focus unless indicated. Then, R & D investment which occurs by the management of firm costs will not lead to long-term profitability. Corporate earnings are not permitted under firm recognition, caused by products and services. This means that R & D, by developing products and services

³ Selection and focus on uncertainty avoidance is not suitable for long-term. The reason is to reduce the variety of firm inside (Kathryn and Michael, 2009).

⁴ Diversification of this study is the products and services diversification and area diversification.

Binding of customer needs to request as firm provides products and services, is due to neither (Ansoff, 1965).

that are necessary for long-term business of firm, underpin sustainable business of the firm.

Far from R & D strategy and business strategy should be considered uncertainty in the described technologies and business since technology uncertainty affects R & D strategies of an R & D department and business strategy affects the uncertainty of the business. Then, a relationship business strategy must be consistent with the R&D strategy, which will need consistency in the firm’s behavior to avoid the uncertainty of business and a firm’s behavior to avoid uncertainty of technology.

VII. Consistent Uncertainty Avoidance Behavior

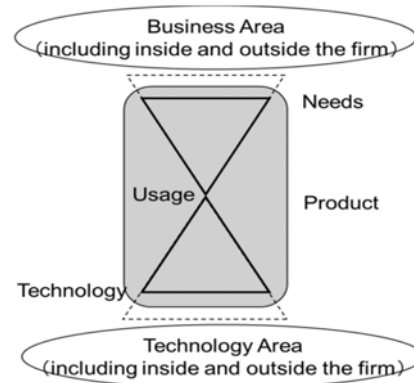
The combination of uncertainty avoidance patterns of technology and business will be represented in Table 1. [A], [B], [C], and [D] show which combinations of two of the business and technology relationship between two behaviors to avoid uncertainty.

Table 1-Consistent Relationship of Avoidance of Technical and Business

Business \ Technology	Technical diffusion • Usage aggregation	Technical aggregation • Usage diffusion (Techniques used for other purposes)
Search-demand and Intensive-usage	[A]will ensure consistency of usage (However, business and technology diffusion is limited)	[B]it is fixed inconsistency, because technology usage diffusion is not necessary.
“Specific-needs and Diffusion-usage” (Products and services used for other purposes)	[C]it is fixed inconsistency, because difficult to achieve necessary expansion of technology usage.	[D]will ensure consistency of usage (however, there is risk of inconsistency.)

[A] of Table 1 keeps a constant degree of consistency (pic 1). [A] is considered consistent where proposed usage of technology and requested business usage are clearly aggregated. However, [A] usage cannot be extended, usages are aggregated. If there is no suggestion or request for extension of technology and needs usage, subsequent business development and technology deployment is impossible. Therefore, the growth- oriented firms find it difficult to choose [A].

Pic 1-Consistent Relationship of [A]



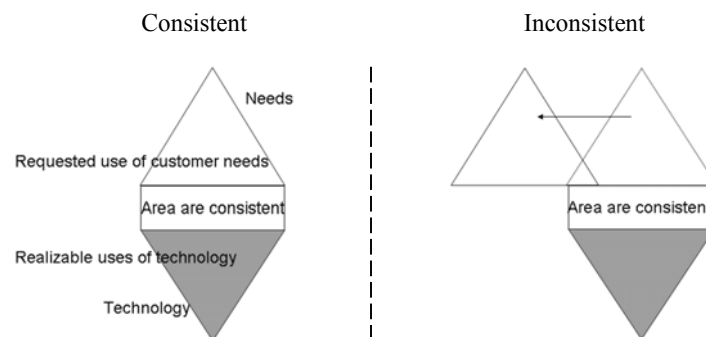
[B] of Table 1, the technical side is trying to expand its use. However, the business side is aggregating demand usage. This situation leads to unnecessary usage extension since diffusion technology usages do not require the business side. This will lead to inconsistencies between proposed usages of technology and requested usages of business. This is situation to develop usages that do not use technology in the

business. [C] of Table 1, the situation in business is in many usages that require in aggregate technology use.

This is inconsistent, as businesses are trying to expand its usage, not support the technology. In other words, it is difficult to achieve the necessary expansion in business usage. [B] and [C] relationship is inconsistent fixed between proposed usage of technology usage and requested business usage. Thus, C and B are incorrect for a firm's behavior to avoid

uncertainty. On the other hand, [D] of Table 1 is consistently trying to expand its usage between technology and business (pic 2). However, this relationship could be inconsistent by a discrepancy between proposed usage of technology usage and requested business usage. It is lose supported by the status usage of existing technologies, and requirements of existing usage be have changed to meet customer needs (Pic 2 Inconsistent).

Pic 2-Consistent Relationship and Inconsistent Relationship About [D]



As described above, in order to avoid uncertainty, firms need to eliminate inconsistencies in the technical side and business side for avoidance. To be able to resolve an inconsistency in behavior of [D], a firm is unable to remain in uncertainty avoidance. Therefore, suggestions about the avoidance of uncertainty surrounding firm's R & D by [D] in order to analyze management and resolve inconsistencies that can be a chosen behavior for a firm.

VIII. Case Analysis

This study is intended to derive the factors surrounding uncertainty avoidance and uncertainty avoidance behavior. Thus, this study analyzes businesses with successful firm avoidance behavior from the increased uncertainty due to changed needs of customers in technology and business and to avoid uncertainty it enabled. Therefore, the case will be

analyzing a Fujifilm Holdings Corporation (following as Fujifilm). Because Fujifilm succeeded in extending technology usage of film technology from decreased demand for film cameras being used since the advent of digital cameras.

8.1 Reduced Business of Fujifilm

Fujifilm is in the development and manufacture of photographic film and has a top share of the industry over the years, having focused on photographic film (NIKEIMONozUKURI, 2010). However, the photographic film market conditions changed significantly since the 1990s. This change in market conditions was brought about by the advent of digital cameras. Digital cameras use imaging devices (optical sensors), and recognizing the image, a camera saves images in a digital format. This digital camera, unlike the camera saving images on photographic film generally can be identified in images. In addition, it is

possible to edit digital images, giving greater convenience to the user. Digital camera drove to reduce the market for film cameras for that reason. With a shrinking market for film cameras, a reduced film market for film camera images save for material. For this change, Fujifilm, developed the DSC (Digital Still

Camera) themselves in 1988 and launched a digital camera market in 1993. However, a core business of Fujifilm, the photographic film business was to be reduced further in exchange for entry into the new market. The photographic film business dropped 20% of its annual sales in 2000.

Table 2 - R & D Cost Ratio Sales by Business Segment and Ratio of Sales of Each Business Sector in FUJIFILM Holdings

Business sector \ Year	2001	2002	2003	2004	2005	2006	2007	2008	2009
Imaging Solutions	5.56 (33%)	5.34 (33%)	5.37 (32%)	5.64 (29%)	4.74 (26%)	3.56 (22%)	3.10 (19%)	3.49 (17%)	3.93 (16%)
Information Solutions	5.70 (29%)	5.69 (29%)	6.03 (29%)	7.08 (30%)	7.74 (33%)	7.50 (37%)	8.43 (39%)	10.18 (39%)	9.74 (41%)
Document Solutions	6.89 (39%)	7.74 (38%)	8.49 (39%)	7.06 (40%)	7.41 (41%)	6.82 (41%)	6.48 (42%)	7.46 (44%)	7.89 (43%)
All business sales & All business R & D cost ratio	6.12	6.35	6.77	6.65	6.83	6.36	6.59	7.85	8.03

※ Created: report from author retouched securities of FUJIFILM Holdings

※ R & D cost ratio sales by Business Segment = R&D costs for each business sector÷sales for each business sector×100

※ Ratio of sales of each business sector = sales of each business sector÷sales of all business sector×100

※ Innovation Solutions, Information Solutions, Document Solutions is a business segment since 2001, Fuji Film. Each business product is as follows.

Imaging Solutions	Color films, digital cameras, photofinishing equipment, Color paper for printing Photography, Chemical, Services, etc.
Information Solutions	Medical Systems and Life Sciences materials, Graphics system equipment, Flat panel display materials, Media, Optical devices, Electronic materials, Inkjet Materials, etc.
Document Solutions	Office copiers and MFP, Printer, Related Products Production Services, The paper, Consumables, Office Services, etc.

8.2 Cosmetics Business Development

With the shrinking film business, Fujifilm planed a medium term management plan (February 2004), and it decided to enter into the Healthcare and Pharmaceutical business (including the cosmetics business)⁴⁴. For this entry, Fujifilm renamed the Life Science institute to the ASAKA Institute (June 2004). Fujifilm has started up research and development for the healthcare and pharmaceutical business. On the other hand, while Fujifilm invests aggressively in research and development, (Table 2) it carried out large-scale restructuring.

Fujifilm established a new business fund (September 2004), conducted jointly with others to develop a cosmetics business once supplemented with enough resources⁴⁵. In addition, Fujifilm has changed the system from the Business Division Research

Institute to the SENSIN Research Institute (Central Research Institute). This was due to a technology inventory of seeds that had accumulated inside the firm. The result is a functional cosmetics “EFUSUKUEAAI” series that was released in September 2006 and functional foods and body care “EFUKYUBUAI”. However, these products were not adapted to the market (NIKEI BUSINESS, 2009). In addition to this experience, in June 2007 it launched a functional cosmetics series of “ASUTARIHUTO”, which has been selling in the market up to now. This success has been evaluated with respect to a constant cosmetics business.

8.3 Evaluation Points of the Cosmetics Business of Fujifilm

⁴⁴ Business Plan「VISION75」is Established in February 2004, Started in June 2004, Conducted until March 2007 (Fujifilm Holdings' financial report).

⁴⁵ F2M Inc. was founded by joint venture with Dentsu in June 2006. FUJIFILM CMIC Healthcare Inc. is founded by joint venture with CMIC Inc. in 2005(firm's Homepages).

Fujifilm launched cosmetics in 2006, and had been limited to mail order. Fujifilm strengthened this in 2008 from sales in variety shops and other stores. As a result, in July 2011, the stores exceeded 6,000. Then, in 2010, sales exceeded \$100 million (Nikkei Information Strategy, 2011). This has grown steadily since it entered the cosmetics business (HITOTUBASHI business Review, 2010). Fujifilm's entry into the cosmetics business is based on Fujifilm's proof that success can be determined constant.

IX. Technical Similarities Between Photographic Film Technology and Cosmetic Technology

Such an entry is considered successful new business development in relatively short time because there were technical similarities. The medium-term management plan was in accordance with R & D sectors and chemical techniques it had accumulated in the photographic film business which it applied to entry into the cosmetics business. Similarities of important technologies in this entry into the cosmetics business number three. These techniques had been developed for a color film business. Therefore, the cosmetics business had a lack of coordination with its business. One was the use of collagen technology. As generally known, collagen is the main raw material for photographic film and a component of skin. Fujifilm had been conducting R & D on film from earlier. It was used as a coating agent for the photo surface and the photosensitive layer of photographic film. It has been used as an ingredient in skin elasticity in constituting the cosmetics business. Number two is anti-oxidant technology. Anti-oxidation technology is used in order to prevent discoloration in a photo, which Fujifilm had been conducting R & D technology on. Astaxanthin is one of the antioxidants that was stored in the firm's R & D database during many years of R&D activities in Fujifilm, which is used as a main ingredient in cosmetics. This anti-oxidant is used as an ingredient for anti-aging skin cosmetics. Number three was particulate control technology. Particulate control technology has been used in various

fields such as pharmaceuticals and electronics industries. Fujifilm has been developing a usage to improve the quality of printing photos. Particulate control technology is being used to improve stability of the materials at the nanometer level of the antioxidant astaxanthin in Fujifilm cosmetics.

X. Business Use Technical Proposals

Between photographic film and cosmetics this way, there are certain technical similarities. These similarities had been recognized in social recognition in the firm of Fujifilm. Before 2000, Fujifilm the R&D department had an in-house proposal regarding the likelihood of entry into the cosmetics business based on the basis of this similarity. However, new business development decisions were not for photographic film as the business was healthy (NIKKEI MONODUKURI, 2010: p.199). At that time Fujifilm was inconsistent between actions for dealing with uncertainty in technology (Usage extension = proposed expansion into cosmetics) and actions for dealing with uncertainty in business (Intensive use = Stable performance of business) (Pic 3). In this regard, when the firm started a new initiative distinguished from the existing business, when existing businesses are healthy, they are considered to be obstacles to new initiatives. In contrast, firms that recognize the high uncertainty surrounding business are considered to devote efforts to diversify the markets supported by the firm in order to reduce persistent uncertainty.

XI. Conclusion

To summarize the case for Fujifilm, behind the successful management of consistency and avoiding uncertainty in the business of Fujifilm technology are conditions were considered that existed as follows.

First, the sense of crisis was caused by decline and restructuring of staff in the film business. This sense of crisis has increased the need to avoid the uncertainty of the business. It was considered a factor to motivate

development of new business or business strategy. As mentioned above, even with proposed technology usage extended from the R & D department, when recognizing the existing businesses as healthy it is difficult to form the motive for expansion usage and launch new business. Therefore, when there is a sense of crisis in existing businesses there will occur motives for the development of new business.

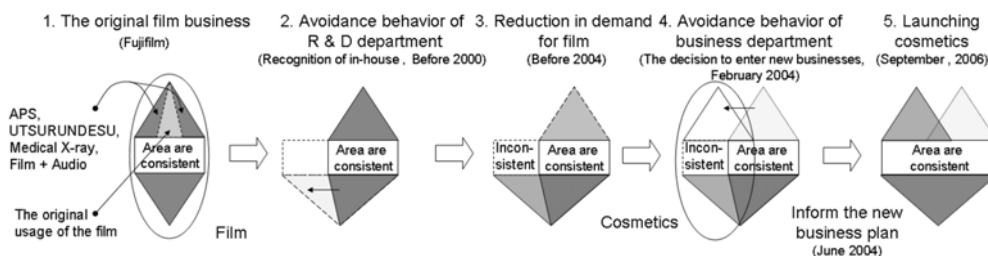
Second, there was a technical base in Fujifilm. Fujifilm is ahead in film technology and its surroundings and for many years it had accumulated. Fujifilm is not only providing products for film cameras, offerings to market, film with lens [UTSURUNDESU] and medical film production (NIKKEI BUSINESS, 1990). On this basis, Fujifilm is considered to have been ahead of the field in film.

Third, the tech was similar between film technology and cosmetic techniques. Film and cosmetics are similar scientific fields with a primary material of collagen; both products are also used in anti-oxidants. That technology was not applied by the film business as has been focused by Fujifilm. Technical similarities

affected the success of business when the development of new business was considered.

These three conditions were considered to be necessary conditions to take action to avoid the uncertainty surrounding the technology and business. Regarding technology, Fujifilm has accumulated technology inventory and was new technology bound. Therefore, Fujifilm was a collection of foreign researchers in the field and established an advanced laboratory. To that end, Fujifilm established advanced research laboratories and has a collection of disparate research in same fields. In business, Fujifilm recognizes the uncertainty that originated internally and externally the need for new business development and other supplemented needs from a joint venture with enough resources. In the market, Fujifilm was strengthening its system to assess the market and has responded quickly to the assessment of the market. Fujifilm was able to give new value to technology, and the technology was relatively undervalued in technical usage (or a strong reduction in R & D investment) through the use of new business.

Pic 3 - Fujifilm's Response To Uncertainty



XII. Considerations

Fujifilm has succeeded in adding new value; it has the expansion of operations with technology it had accumulated in the film business. In one case, the technology extends the application for that heightened motivation for new business development and business environments due to changes in technical similarities, which are considered to be conditions necessary to foster new business. However, Fujifilm considered time

and cost could be reduced, though the base of technology it had accumulated over the years when developing products for new business. However, years of experience in business operations may be necessary to increase the crises for development of new businesses. In this study, from the viewpoint of uncertainty avoidance in technical usage, analyzes a survey and summarized uncertainty avoidance of the entire enterprise. However, this study is to present a general hypothesis and to demonstrate the hypothesis in that

many areas are still to be supplemented. For firms to address uncertainty is important as increasingly commoditized product shorten life cycles and in the environment it is difficult to recover the cost of corporate R & D investment (Hugh et al, 1997;Kusunoki, 2009). Also, the future is discussed, and its importance in terms of whether uncertainty avoidance is not growing. Technology expansion adds further weight to avoiding uncertainty, so we would like to continue this research in the future.

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Sustainable Competitive Advantage: The Relationships between Key Managerial Components and Export Performance

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ABSTRACT

This paper explored the variations in the manager's perception of the degree of the export venture's achievement of important strategic objectives with respect to the level of achievement of key implementation tasks. The interaction between key managerial components (two tasks at a time) and export performance was evaluated by using three congruence models developed by Joyce et al. (1982). The one-way ANOVA was employed to evaluate the contrasts between the cell means in the 2 x 2 matrix and to identify the congruency model. All the interactions with the manager's perceived achievement of strategic objectives as the dependent variable are highly significant. The majority (90.9%) of the interaction takes the form of effect congruency and supports the hypothesis that more is better. Only one combination, LEADERSHIP and BEST PRACTICE, displayed the substitute effect.

I. Introduction

An organization's strategic capability does not only lie on the intrinsic strength of its resources but also on the way these resources are deployed and controlled (Johnson and Scholes, 1993; Viljoen 1994). Successful strategy implementation occurs when the targets of the strategic plan are met or even exceeded. Strategy implementation, being basically an internal administrative undertaking, is situation specific. Formulas that worked well with some managers are found wanting by others. The diversity of the environment in which businesses operate and the

variety of organizational practices and competitive setting dictate a tailor-made approach to implementing strategy. Irrespective of the specifics of the situation, certain managerial components are deemed important to the implementation process. These are: a) building a capable organization (ORGANIZE); b) linking budgets to strategy (BUDGET); c) installing strategy-facilitating administrative support systems and policies and procedures (ADMIN. SUPPORT); d) instituting best practice (BEST PRACTICE); e) designing strategy-supportive reward systems (REWARDS); f) building a capable strategy-supportive culture (CULTURE); and g)

exercising strategic leadership (LEADERSHIP) (Thompson, Strickland and Gamble, 2010). The degree to which each component is achieved is determined by the extent by which the key tasks are executed. Crucial to building a capable organization are people, their technical skills, know-how and good personal chemistry, business and decision-making processes conducive to smooth execution of plans. Important to linking budgets to strategy are budget sufficiency and flexibility to shift its use to support new ideas and ventures and managerial involvement in the budgeting process. A monitoring system allowing for early detection of the need to adjust plans, a two-way information system between management and employees, and policies that clearly guide plan execution are important components of an administrative support system. Continuously seeking best-in-industry and best-in-world practices is integral to assuring improved efficiency. Rewards should extend to all managers and workers involved with the export venture and linked to performance targets clearly spelled out in the plans. Emphasis on achievement and excellence and incorporating such beliefs and values into employee training and educational program are essential to perpetuating corporate culture.

Critical to success is a concerted effort to create patterns of fit between the managerial components and export performance. Depending on the situation, some of these components tend to be more important than the others. This implies that in a certain combination, one component is able to compensate for the lack of the other. The strategy implementer's role is therefore to determine which combinations effect good performance.

II. Key Implementation Task Combinations

Resources are scarce and their allocation among various company programs or undertakings is a difficult process. In the case of allocating resources for the accomplishment of the key implementation tasks, the same difficulty is encountered. The question that is

foremost in the minds of managers is "How much support should be given to a certain task in order to stimulate good performance?" However, due to scarcity of resources, managers are forced to choose the tasks that would be more effective in improving performance. This means that some tasks will have to be sacrificed (not given as much support as the others). The selection of tasks to combine is based on the assumption that one task may compensate for the other in boosting performance. As such, one key task will receive more support than the other. An effective organizational structure may alleviate the effects of poor leadership on performance (Bonoma and Crittenden, 1998). The converse may also be true. The same argument applies to leadership and administrative support system combination.

Best practices may substitute for good leadership in bringing about productivity, and vice versa. When best practices are instituted in a company, the role of the leader in encouraging and driving the workers to more effectively and efficiently produce good quality goods or services may diminish in importance. In the absence or lack of best-in-industry or best-in-world practices, rewards may drive workers to productivity. The converse may also be true.

A strong culture may enhance performance in the absence or lack of proper administrative support or an attractive reward system. Workers may be motivated by a management that emphasizes achievement and excellence, sets reasonable and clear performance targets and treats employees with dignity and respect despite defects in policies and procedures and monitoring system. A small enterprise in one of the villages in the Philippines does not have a policy manual or a set of policies and procedures. The monitoring system is so simple: the manager-owner checks on their work from time to time and corrections and adjustments are made on the spot. The workers are loyal to him and are inspired to put in their best efforts in their jobs. The reason they gave the researcher was, "Our manager considers us his family so we treat him as one of us too."

When the organization is composed of people with good personal chemistry and appropriate knowledge

and skills and activities critical to the achievement of targets are identified, better performance may be expected despite a weak culture. Weaknesses in the administrative support system may be alleviated by a strong management team. Good personal chemistry may facilitate a smooth flow of information, hence enhancing the monitoring system. A good management team may drive its workers to better performance despite deficiencies in the reward structure.

When an operating budget is not substantial or flexible, workers can still be motivated to perform better and improve productivity through a good reward structure. The converse may also be true. When the reward structure is unattractive, motivation for workers to perform better may come from a sufficient operating budget. A substantial budget may allow for acquisition of materials and equipment necessary to perform tasks more efficiently and effectively.

III. Research Proposition

Though this study used objective and subjective measures of export performance considering both economic and strategic dimensions, for the purposes of this paper, only one subjective measure shall be discussed. The subjective measure reflects the manager's perception of the export venture's achievement of important strategic objectives.

The research proposition is: *The manager's perception of the export venture's achievement of important strategic objectives varies with the level of achievement of key implementation tasks.*

IV. Research Method

4.1. Data Collection and Key Informants

One hundred eighty-seven (187) firms were drawn from the directory of Philippine exporters. Personal interviews using structured questionnaires were conducted with export managers or persons directly involved in the firm's export operations. The largest of

the respondents (37%) belonged to the gifts, toys and housewares industry. The second largest (32%) respondent group manufactured agricultural and horticultural products. The smallest group in the sample exported electronics, footwear and industrial products. The sample consists mostly of small firms (64%) and large firms (13%). Medium-sized firms consist of 9% of the sample while the rest are micro-size and cottage-size firms.

4.2. Analytical Procedure

The one-way ANOVA was used to evaluate the relationship between key task combinations (two tasks at a time) and the manager's perception of the export venture's achievement of important strategic objectives. Combinations of more than two key tasks can be used, but the complexity of high level interaction makes it very difficult to interpret. The interaction between key managerial components and export performance was evaluated by using three congruence models developed by Joyce et al. (1982). Figure 1 illustrates the distinctions among the models. In testing for interaction effects between export performance and key implementation tasks, the variables representing the latter were dichotomized into low and high to denote the extent by which these tasks are executed. The one-way ANOVA was employed to evaluate the contrasts between the cell means in the 2 x 2 matrix and to identify the congruency model (Figure 2).

4.3. Three Interaction Models

4.3.1. Effect Congruency

This model posits that the characteristics of both independent variables are important influences on the dependent variable. It takes the "more is better" perspective which assumes that additional units of the independent variables will better explain the variations in the dependent variable. The effect congruence model emphasizes the main effects of potentially interacting variables (Griffin, 1980). Such type of additive interaction where two criterion variables make

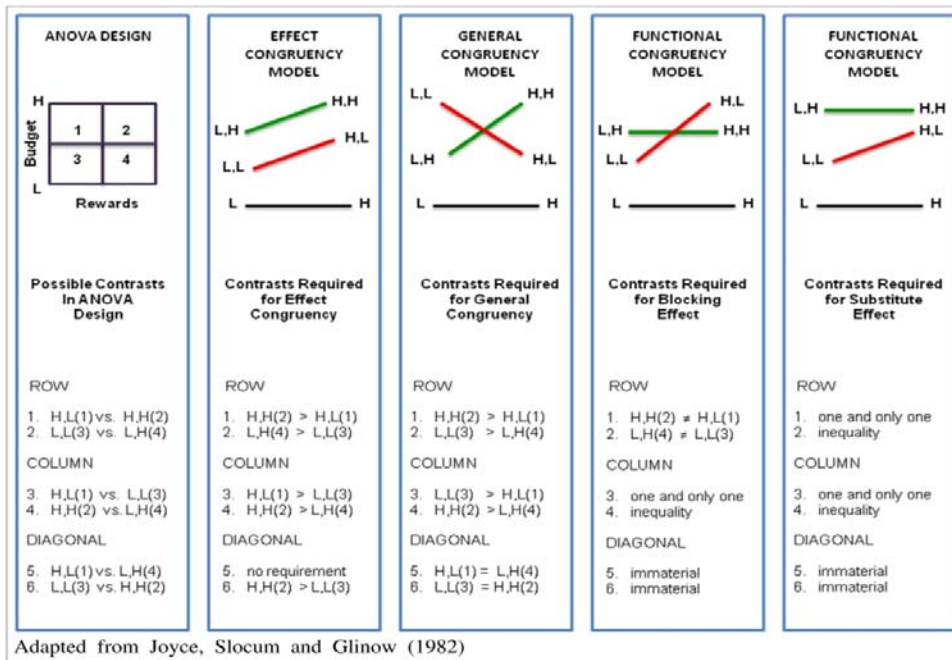
independent and linear contributions to a dependent variable is deemed important in past researches (Rabinowitz, Hall and Goodale, 1977). The effect congruence model requires no statistical interaction; therefore, two parallel lines represent the non-interaction of two factors (Figure 1).

4.3.2. General Congruency

This model theorizes that congruency is present when both independent variables are correspondingly high or low. Congruence is ascertained by this fit between the predictors; hence, it may be evaluated without referring to any criterion variable. In contrast to effect congruency, the general congruency model assumes interaction effects and emphasizes similar and matching levels of independent variables (Figure 1).

Thus, general congruency exists when equally congruent levels of an independent variable are associated with equivalent levels of the criterion variable ($H,H=L,L$ or $H,L=L,H$); and congruent levels of predictors as opposed to incongruent levels, are associated with higher levels of the criterion variable (L,L or H,H compared to L,H or H,L). Predictions of the general congruency model are notably different from those of the effect congruency model. The latter may predict high levels of the criterion variable with high levels of the independent variables and correspondingly, low criterion levels with low predictor levels. The general congruency model, on the other hand, finds no difference in the criterion variable when both predictors are correspondingly high or low since in either situation, a fit has been achieved between the predictors.

Figure 1. Competing Models of Fit and Statistical Requirements for Detecting Each



4.3.3. Functional Congruency

In contrast to the first two models, the functional congruence model does not support the “more is better” notion nor does it hold that the general congruency of

predictor variables lead exclusively to high levels of criterion variables. The functional congruency model suggests that a high level of either predictor 1 or predictor 2 may be sufficient to result in a high level of criterion variable, but joint occurrence of both predictors may do little to increase the level of criterion.

There are two forms of functional congruency: blocking and substitute effects. A blocking effect arises when a variable screens the potential effects of another. In a study of person-situation interaction, Joyce et al. (1982) found that job satisfaction is affected by personality when a task is non-motivating and the work climate is non-achieving. However, personality makes little difference when either the climate or task is high (motivating or achieving). Climate and task characteristics, while substituting or compensating for one another, block the potential effects of personality on work satisfaction.

A blocking effect is apparent when the level of predictor 1 is high, changes in the level of predictor 2 are not associated with changes in the criterion level (L,H vs. H,H); when predictor 2 is either high or low, changes in the level of predictor 1 are associated with the changes in the criterion level. However, when the particular levels of either predictor can block the effects of the other, a substitute effect exists. The following three conditions hold for a substitute effect: 1) when predictor 2 is high, changes in the level of predictor 1 are not associated with changes in the criterion level; 2) when predictor 1 is high, changes in the level of predictor 2 are not associated with the changes in the criterion level; and 3) when either predictor 1 or predictor 2 is low, a change in the other is associated with the criterion level.

V. Results and Discussion

5.1. Key Implementation Tasks Crucial to Perceived Achievement of Important Strategic Objectives

All of the key 11 key task combinations are very highly significant ($p < .001$) to perceived achievement of important strategic objectives (Table 1). Except for LEADERSHIP-BEST PRACTICE, effect congruency is manifested in all key task combinations. The REWARDS-LEADERSHIP plot may not show perfect parallel lines and at a first glance appears to be displaying a substitute effect (Figure 3). However, a closer examination of the cell contrasts in Figure 2 indicates the existence of two significant column inequalities ($Q2 > Q4$ and $Q1 > Q3$) which violate the conditions for a substitute effect, thus confirming the effect congruence. The ORGANIZE-LEADERSHIP plot does not clearly present a semblance to any of the congruency models (Figure 1). However, the cell contrasts (Figure 2) show two row inequalities ($Q2 > Q1$ and $Q4 > Q3$) and two column inequalities ($Q2 > Q4$ and $Q1 > Q3$), conditions which violate the requirements of a functional congruence. A significant diagonal contrast ($Q2 > Q3$) confirms the existence of effect congruency.

Effect congruency postulates that managers believe that achievement of important strategic objectives is more likely when there are high levels of both of the variables in the combinations considered. When bonuses and incentives extend to all managers and workers and are well linked to performance targets, and there is a substantial budget for the implementation of export plans, then managers believe that important strategic objectives will be achieved to a great extent. This performance outcome is also predicted when there are high levels of REWARDS and LEADERSHIP, ADMIN. SUPPORT and LEADERSHIP, ADMIN. SUPPORT and CULTURE, REWARDS and CULTURE, ORGANIZE and CULTURE, ORGANIZE and REWARDS, BEST PRACTICE and REWARDS, ORGANIZE and LEADERSHIP, and ORGANIZE and ADMIN. SUPPORT. These relationships imply that both predictors in any combination are important to the criterion variable, especially at high levels such that managers may perceive a lower level of achievement of strategic objectives when the level of both predictors is low.

Table 1. ANOVA Results for Perceived Achievement of Important Strategic Objectives and Combinations of Key Implementation Tasks

Variables	F	Difference	Type of Congruency
Budget x Rewards	9.199	Q4>Q1†; Q2>Q3***; Q4>Q3*	Effect ***
Rewards x Leadership	10.465	Q1>Q3**; Q2>Q3***; Q2>Q4†; Q4>Q3*	Effect ***
Administrative Support x Leadership	13.975	Q2>Q3***; Q2>Q4***	Effect ***
Administrative Support x Culture	18.599	Q2.Q1*; Q2>Q3***; Q2>Q4***; Q4>Q3*	Effect ***
Rewards x Culture	14.476	Q2>Q1†; Q2>Q3***; Q2>Q4†; Q4>Q3**	Effect ***
Organize x Culture	20.869	Q1>Q3†; Q2>Q3***; Q2>Q4***; Q4>Q3**	Effect ***
Leadership x Best Practice	7.613	Q1>Q3**; Q2>Q3***; Q4>Q3†	Substitute ***
Organize x Rewards	18.604	Q1>Q3***; Q2>Q3***; Q2>Q4**; Q4>Q3*	Effect ***
Best Practice x Rewards	8.478	Q2>Q1*, Q2>Q3***;	Effect ***
Organize x Leadership	15.224	Q2>Q3***; Q2>Q4***	Effect ***
Organize x Administrative Support	21.757	Q2>Q1**; Q1>Q3†; Q2>Q3***; Q2>Q4***	Effect ***

*** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$

The LEADERSHIP-BEST PRACTICE combination illustrates the substitute form of functional congruence (Figure 3). The cell contrasts in Figure 2 show a single column inequality ($Q1 > Q3$, $p < .01$). The row contrasts show a more substantial difference between Q3 and Q4 relative to Q1 and Q2. Therefore, a single row inequality is assumed. When LEADERSHIP

is high, changes in the level of BEST PRACTICE are not related to changes in the level of perception of achievement of strategic objectives. At high levels, BEST PRACTICE and LEADERSHIP substitute for each other in effecting changes in manager's perception of achievement of strategic objectives.

Figure 2. Two x Two Matrices for Perceived Achievement of Important Strategic Objectives and Combinations of Key Implementation Tasks

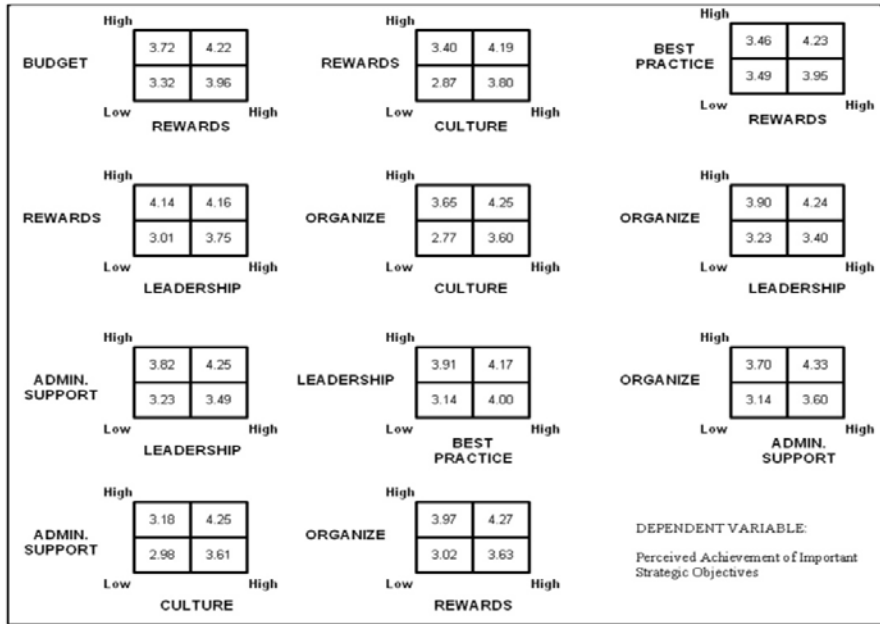
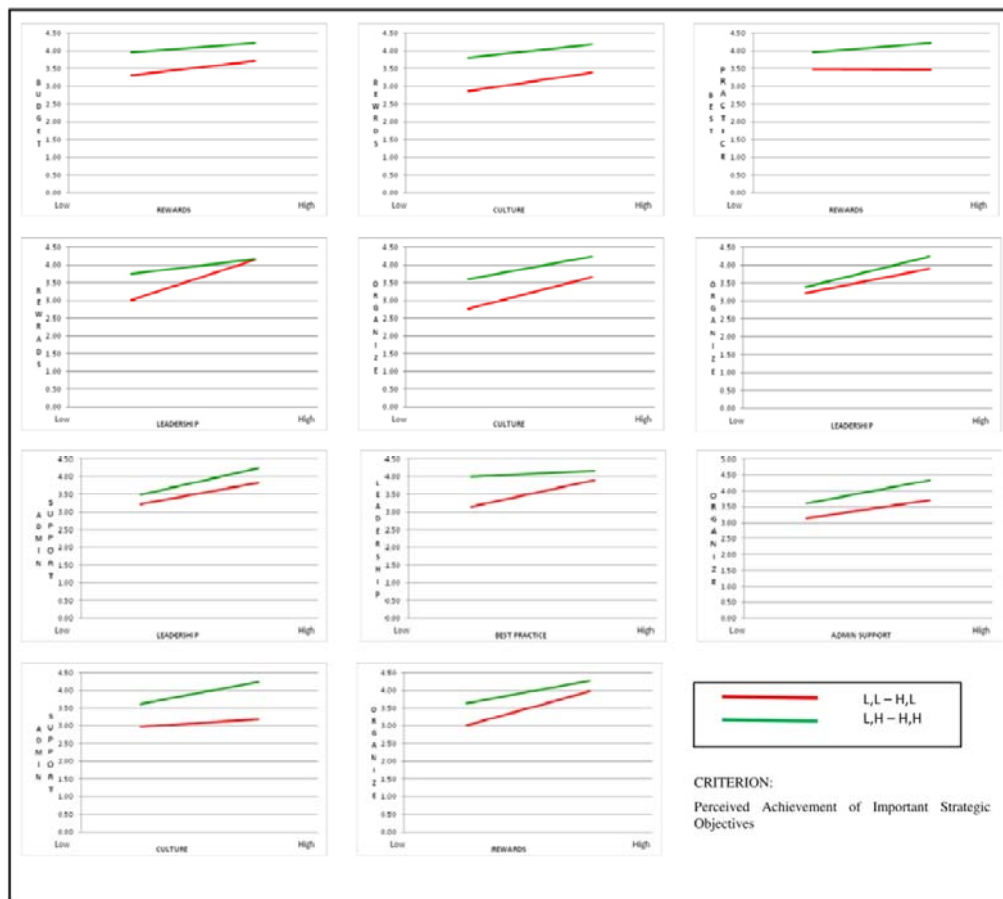


Figure 3. Interaction Plots for Perceived Achievement of Important Strategic Objectives and Combinations of Key Implementation Tasks



VI. Conclusion

All the interactions with the manager's perceived achievement of strategic objectives as the dependent variable are highly significant. The majority (90.9%) of the interaction takes the form of effect congruency and supports the hypothesis that more is better. Only one combination, LEADERSHIP and BEST PRACTICE, displayed the substitute effect. When at a high level, each key task substitutes for the other in effecting better performance outcomes. This means that when one of the key tasks in a combination is high, changes in the other are not associated with changes in performance outcomes. However, in any combination, when the level of one key task is low, changes in the other are

associated with variations in performance. However, conclusions cannot be made on which key task is better relative to the other in any combination in enhancing performance outcomes. The implication for management is to keep the level of one key task in any combination high at any time to maintain a desired level of performance. The decision on which task should be kept at a high level is based on resource availability, cost and potential of providing sustainable competitive advantage.

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