

A Proposed Framework for Service Trade Mode Selection: The Value Chain and Value Co-creation Perspectives¹

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1. Introduction

Owing to business trends moving toward service economy and globalization, service trade is becoming a vital issue for many countries. This is particularly true for countries either fostering industrial development by governments or with lower revealed comparative advantage index (RCA) for service sectors.

In fact, the growth of service exports within the past 25 years is much higher than that of goods exports. The value of service exports has grown sevenfold since 1984, with a compound annual growth rate of nearly 7% per year (Habermann et al., 2002). In 1995 the World Trade Organization (WTO) was formed to help nations deal with the issues of service trade in a much more systematic manner. Then, came the General Agreement on Trade in Services (GATS) with its corresponding modes of service trade. In light of this growth, it is surprising to find that there is very little research focusing purely on service trade, in contrast, for example, to the number of studies on manufacturer internationalization (Cicic et al., 2002). Generally speaking, key drivers for service globalization include deregulation and the opening of closed domestic markets, impacts from the GATS, increasing demand for services resulting from economic growth, advanced ICT, and trends towards service outsourcing (La et al., 2005).

Moreover, the current work on service research overemphasizes the features of service itself, processes and encounter (i.e., levels of service intangibility, contact and customization). For instance, Maister & Lovelock (1992) positions service industries by two static features: level of customization and level of interaction, and suggests that each service industry should belong to one single position. Restaurants, for example, are regarded as a service type with high degrees of customization and interaction. However, Teboul (2006) shows that restaurants can perform well and serve customers across a variety of modes, as in the case of fast food restaurants with low levels of customization and interaction. Such a claim may imply that, as long as a given service type can truly fulfill customer needs, service providers

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can still deliver services in quite different manners, while still cultivating a suitable environment for co-creating value with customers (Payne et al., 2008). Moreover, if the context of service target is taken into account, the service provider has to further think decisions on rearranging the value chain in this aspect.

The above evidence leads to a hypothesis that both value co-creation with customers and value chain analysis may contribute to determining the most appropriate GATS modes for service trade. Consequently, this research examines how to identify strategies and practical routes of service trade by integrating the viewpoints of value chain and value co-creation from the supplier's viewpoint. To explore this issue, we examine the healthcare industry case which focuses upon supplier value creating processes.

This paper is organized as follows. Section 2 highlights the service trade framework and the model of value co-creation. In Section 3, we introduce the basis of the healthcare sector (including the challenges, needs and the value chain), and the story of two representative Indian cases from the real world. Section 4 elaborates how to integrate with the modes of service trade and suppliers' value co-creation strategies through findings of these two cases, and validates by a pilot survey on Taiwanese hospitals. Finally, we conclude with the findings, implications and future works.

2. Current understanding: theoretical review

To provide a richer background for elaborating and building the framework for service trade, we review the literature in two main areas: the service trade framework with implications on value chain movement from GATS (so as to help redesign the change of value chains in the service trade context), and practices for identifying entry points of value co-creation for service providers.

2.1 Service trade and value chain movement

GATS, a formal written agreement of WTO, came into force in 1995, is the first set of legally enforceable rules of trade measure governed by WTO members in services. As shown in Figure 1, GATS defines trades in services as occurring through four possible modes of supply: cross border supply, consumption abroad, commercial presence, and presence of natural persons (Hamermann et al., 2002).

Cross-border supply of services (Mode 1) requires physical movement of neither supplier nor customer. The service itself crosses the border, usually delivered through information and telecommunications (e.g., through fax, e-mail, web services) or physical transportation (e.g., 3rd party global logistic service). Typical examples include management consulting (e.g., studies, reports, business plans and financial advice), education and training (e.g., e-learning and distance learning), and healthcare (e.g., e-medicine) (Hamermann et al., 2002).

Consumption abroad (Mode 2) involves services provided to another country's citizens, who are required to travel to the location for those services. The most significant examples are travel-related services and those services bundled with tourism (e.g., medical travel, agri-tourism, eco-tourism, and edu-tourism) (Hamermann et al., 2002).

Mode 3 is called *commercial presence* wherein services are sold in a member's territory by entities that have set up a presence there, but originate in another member's territory. Commercial presence refers to instances where a company from one country establishes subsidiaries or branches to provide services in another country, for example, financial services (setting up an oversea presence), construction engineering (setting up project offices to manage

local infrastructure projects), information technology (local offices set up to serve local clients), and distribution (including shipping, warehousing and logistics) (Hamermann et al., 2002). Finally, *the presence of natural persons* (Mode 4) provides services in which require the temporary movement of natural persons. Service providers travel from their own countries to supply services in other countries. The most significant examples are exports that temporarily travel across borders for services like construction (e.g., architects and trades people), education and training (e.g., trainers and professional speakers), and recreational and sporting (including coaches, trainers and promoters) (Hamermann et al., 2002).

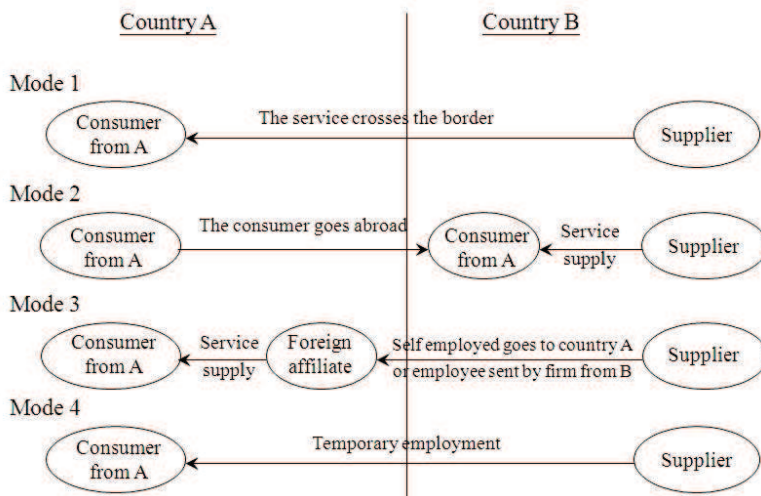


Fig. 1. The synthetic view of four GATS modes (Source: Hamermann et al., 2002)

According to GATS, it is clear that service trade no longer limits itself by the type of commercial presence (as the case of manufacturing sectors); in contrast, GATS helps not only stress the importance of service encounter design, but also highlight the possible impact of value chain design and possible patterns of need fulfillment for foreign markets. Corresponding to the change of value chains, the mode of service trade from GATS in fact offers some practical guidance. As shown in Table 1, the four modes of service trade lead to different degrees of change and types of movement for existing value chains. In particular, a firm which adopts Mode 3 may result in the most significant impact on the movement of existing value chains, while Mode 1 may cause almost no change for existing value chains. Yet, at the same time, owing to different degrees of trade entry for the supply side and different levels of interaction for the demand side, a service provider adopting each mode may suffer correspondingly different degrees and types of challenges. Typical challenges include how to build customer trust, how to deliver services through current value chains, and how to build service delivery systems when no local networks exist. Consequently, it becomes a vital issue to diagnose precisely current problems or unfulfilled needs in a region, and then design appropriate modes to enter the market, while subsequently strengthening the capability to penetrate into foreign markets. Service-dominant logic (SDL) or, more specifically, value co-creation, seems to provide a good starting point in this regard.

Mode	Type	Movement of the value chain
Mode 1	Cross-border supply of services	No change (delivery through remote approach)
Mode 2	Consumption abroad	Movement of clients (i.e., service receiver)
Mode 3	Commercial presence	Movement of the resources (asset/capital) of service providers
Mode 4	Presence of natural persons	Movement of people at service encounter (i.e., natural persons / service providers)

Table 1. GATS modes and the corresponding movements of value chains

2.2 Value co-creation

SDL stresses the importance of involving customers as part of the value co-creating processes. In particular, SDL emphasizes that service providers should not focus on delivering ready-made value to customers, but rather on supporting their customers' value creation (Gronroos, 2008).

Following Lusch and Vargo's (2006) concept, Payne et al. (2008) develops a process-based conceptual framework for managing value co-creation processes, with emphasis on the encounters between customers and suppliers. In this framework, firms may identify value-creating processes through the supply point of view, called supplier value-creating processes. The creation of value for customers by suppliers begins with an in-depth understanding of the customer's value-creating processes. However, the types of value co-creation are largely contingent on the nature of their industry, their customer offerings and their customer base. Three types of value co-creation opportunities exist in this regard: (1) opportunities provided by technological breakthroughs, especially as new technology solutions help create new ways for engaging with customers to co-create; (2) opportunities provided by changes in industry logic, particularly the industrial transformation driven by the development of new channels for reaching customers; and (3) opportunities provided by changes in customer preferences and lifestyles.

Additionally, three broad forms of encounter, communication, usage, and service, help facilitate value co-creation (Payne et al., 2008). Communication encounters encompass activities which are primarily carried out in order to connect with customers. Usage encounters refer to customer practices in using a product/service and include the services which support such usage. Service encounters comprise customer interactions with service personnel or service applications.

By its very nature, the concept of value co-creation is now driving service firms to change their current inside-out (i.e., firm-centric) viewpoint into an outside-in (i.e., customer-centric) perspective. If the value co-creation concept holds equally true for service trade, it might further imply that firms should capture customer needs and their own core competence exactly, thus adjusting their value chain to fulfill the market requests. Interestingly, such a perspective not only echoes GATS in certain ways, but also provides a possible alternative for analyzing the issues in service trade.

The authors believe that the integration of value chain analysis with value co-creation may help create a more innovative and holistic analytical framework for the service trade context, resulting in a stronger match with the GATS model.

3. The framework and the analysis

Based on the literature reviewed in Section 2, we aim to develop a framework for service trade mode selection by integrating the concepts of value chain and value co-creation. We also consider what roles a service provider should take when entering a new market. The proposed framework is mainly developed through a deductive approach and demonstrated by cases in the healthcare industry. The major reasons for using the healthcare industry as our exemplar are summarized as follows: (1) healthcare is a relatively big and complex industry amongst all service sectors; (2) it is a highly human-oriented, professional, localized, and regulated industry in most nations; (3) it provides both essential and value-added services, and is regarded as a highly innovative service sector.

We start by introducing the basis of the healthcare sector, including the challenges and needs within the industry, as well as the value chain of the industry. We then analyze how firms apply different modes for service trade through two representative Asian hospitals.

3.1 Challenges and opportunities of the healthcare industry

The global healthcare market is substantial in size comprising trillions of US dollars in revenue annually. The clinic service itself, for instance, accounts for US\$ 804.2 billion; the market of health management and related services in total contributes US\$ 235.5 billion; services for personal health information adds to US\$ 21.6 billion; whereas professional medical / educational training devotes another US\$ 4 billion to this industry (Acharyulu & Reddy, 2004; Dacanay, 2005). Despite already being impressive in size, the potential for growth in the healthcare market is nevertheless equally high. Particularly, when reviewing the eco-system and customer needs of the healthcare system, it is not surprised to find many opportunities and challenges worth further investigation or development.

In terms of barriers to the development of trade in health services, Gonzales et al. (2001) help summarize key concerns as following: nature of medical practice, laws and regulations, financing of care and insurance coverage, accreditation and standards, immigration and foreign exchange requirement, lack of market search on demand for health services, and competition within regions.

With respect to the major trends and opportunities for international medical services, they can be divided into two categories: problems for healthcare (system) providers, and changes in personal needs for healthcare services. With regard to problems for healthcare (system) providers, three key items were identified: (1) long waiting queues for operations in publicly owned healthcare systems in developed countries; (2) unqualified domestic medical service offerings in less developed nations; and (3) rapidly increasing costs of medical insurance and healthcare resulting from higher risks for treatment (Garcia-Altes, 2004).

As for the changes in personal needs for healthcare services, six trends are worth addressing: (1) a paradigm shift in healthcare from treatment to prevention; (2) lifestyle choices that favor surgery to enhance beauty and health; (3) the pursuit of holistic healthcare; (4) demand for customized services for wealthy people; (5) avoiding payments for expensive, domestic medical services (or insurance); (6) the emergence of international marketplace with lower cost options for healthcare services (Garcia-Altes, 2004; Carrera & Bridges, 2006).

Finally, based on GATS framework, Gonzales et al. (2001) helps illustrate the potentially six different forms of trade in health and health-related services, as shown in Table 2.

Mode	Type	Modes of trade in health services
Mode 1	Cross-border supply of services	Trade across borders through mail and electronic media; shipment of samples; analysis of information
Mode 2	Consumption abroad	Care for foreign patients Health profession educational services for foreign students
Mode 3	Commercial presence	Establishment of foreign companies, subsidiaries, or foreign investment for the management or provision of health services
Mode 4	Presence of natural persons	Temporary movement of health personnel to provide services abroad Short-term health consulting assignments

Table 2. GATS modes and the corresponding trade modes of health services (Source: Gonzales et al., 2001)

3.2 The value chain of the healthcare industry

Because of the design of domestic regulation and service systems, as well as the differences of service types, patterns for the value activities of healthcare services are hard to generalize. However, as service providers desire to extend their service targets into foreign markets, it is necessary to have at least a rough blueprint depicting this value chain.

By analyzing all possible activities within the healthcare processes, we elaborate those activities mentioned in Acharyulu & Reddy (2004), Dacanay (2005), Garcia-Altes (2004), Carrera & Bridges (2006), Oberholzer-Gee et al. (2007) and Herzlinger & Virk (2008), and draw the value chain of this industry as shown in Figure 2. Three stages consisting of nine key processes represent primary activities, and four types of supportive activities characterize the value chain.

With regard to the primary activities of this value chain, the three stages are pre-stage (i.e., the engagement and design stage, which include the basic activities of inquiry, engage, arrange, and inbound), during-stage (i.e., the time for receiving primary medical services, which include activities of pre-operative care, various types of major medical services, and post-operative care), and the post-stage (i.e., follow-up stage, which includes activities of outbound and after-sale services). Most activities within the pre-stage and post-stage can be regarded as possible service encounter points even though they may not be viewed as major services from the customer's perspective. Besides, these encounters can be done either as face-to-face or non-face-to-face, and either inside or outside hospitals, depending upon the complexity of the key medical services, as well as the preferences of customers.

In contrast, most activities in the during-stage are services offered during the encounter point. However, because of the high variation of medical service patterns (which can be either in-patient or out-patient, and which can be classified into five categories according to the needs of customers/patients), the portion of these activities which can be done in back-stage varies. For example, activities which are not sensitive to real-time and face-to-face encounters can be handled by people who do not present themselves in the front stage.

In addition to primary activities of the healthcare value chain mentioned above, we deal with the supportive activities in the last part herein. Generally speaking, four categories of supportive activities can be identified: software, hardware, material, as well as information

and cash flow. As seen in Figure 2, each of them covers a variety of activities. The software category covers at least five types of activities: operation management, staff training, laboratory services, R&D and call center service. The hardware category covers equipment, clinics/ room and accommodation. The material category includes transcript, medicine, food and others. While the information and cash flow category takes into account such activities as marketing, payment and insurance.

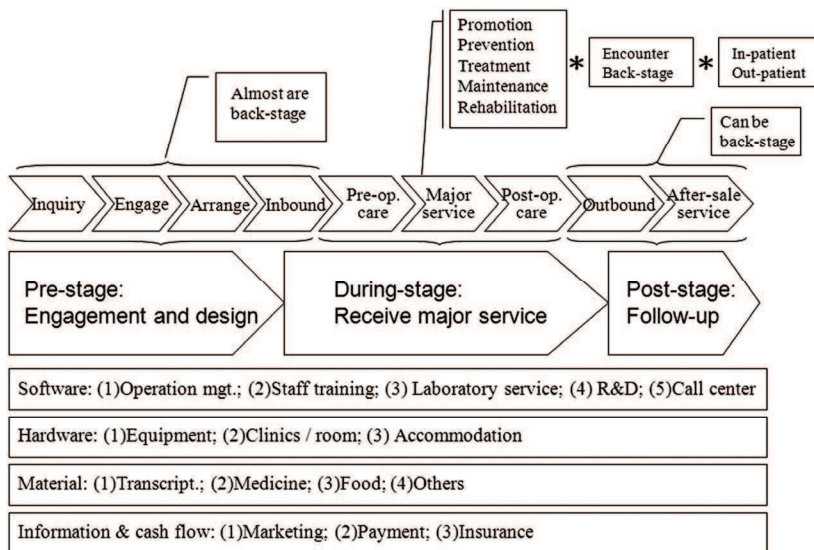


Fig. 2. The value chain of the healthcare industry

3.3 How hospitals penetrate into global markets: Lessons from two Indian cases

In order to clarify possible practices for hospitals penetrating global markets, we here introduce two representative cases from India: Apollo Group and Fortis Healthcare. These two hospitals are ranked as the top two hospitals in India, both in size and quality. Meanwhile, their strategies for internationalization have also been identified as representative for understanding the most common approaches to the healthcare service trade (Oberholzer-Gee et al., 2007; Herzlinger & Virk, 2008).

Moreover, with regard to the reasons for applying data from Asian cases, it was mainly because that Asia is regarded as the most representative and popular place offering medical services worldwide by multiple modes.

3.3.1 Apollo's approaches to global markets

Apollo Hospitals Group, the first for-profit hospital in India, is one of the largest private healthcare group in Asia, managing more than 30 hospitals with 6,400 beds. Apollo has treated patients from more than 50 countries; whereas its share in India's tertiary care market is about 14%. The Apollo Group, fairly speaking, is active in many parts of the healthcare value chain. In particular, Apollo Hospitals Enterprise Limited (AHEL), the publicly listed holding company, owns and operates hospitals in India and abroad, specializing in providing up-market tertiary care (Oberholzer-Gee et al., 2007).

To retain its leading position and to utilize its core competence, Apollo Group is keen to penetrate into global market through multiple approaches. The key strategies of service trade adopted by Apollo Group are described as follows.

Direct investment in other countries: The first Apollo hospital built outside India is Colombo Hospital in Sri Lanka. The main reasons for this direct investment decision are summarized as follows: (1) Apollo had a significant number of patients from Sri Lanka before starting Colombo Hospital; (2) no one else was willing to invest in Sri Lanka; (3) Sri Lankan patients were unwilling to accept Sri Lanka doctors; (4) there were few qualified nurses in Sri Lanka (Oberholzer-Gee et al., 2007).

Medical business process outsourcing: Apollo Health Street Ltd. (AHSL), a subsidiary, is involved in medical business process outsourcing. The most often referenced example is AHSL's hiring of more than 50 certified coders for American health care providers. In order to perform this business, Apollo built up its IT platform and related infrastructure, and set up a branch office in the US (Oberholzer-Gee et al., 2007).

International consulting services: In order to conduct this business, Apollo took two types of projects: transition and management (which help design and build facilities for hospitals) and operation management (which enables Apollo to actually run the facilities outside its own hospital, and staff the senior management team). Three main reasons can be used to explain why Apollo is competitive in this venture: (1) less cost to build a hospital (about half the cost of a competing Australian company's design); (2) integrated service provided by Apollo Group, including human resource recruitment, management and medical equipment sourcing; (3) lower consulting fees (Oberholzer-Gee et al., 2007).

Medical tourism: Apollo regards lower cost of treatment (less than 1/10 the cost of American hospitals) coupled with equivalent or better quality as its competitive advantage. Thus, it started its medical tourism business in the early 2000s by targeting four types of international patients: Indians living in other countries, countries with national healthcare (like UK and Canada), US patients under 65 without health insurance, as well as patients from regional markets where top-quality hospitals and health professionals were hard to find. To implement this business, Apollo cooperated with medical tourism agencies and brokers worldwide. Additionally, Apollo is building an after-care staff clinic in the UK to provide follow up care of patients (Oberholzer-Gee et al., 2007).

To sum up, the four strategies applied by Apollo Group not only cover the four modes of GATS but also greatly illustrate ways of combination of GTAS modes for implementing service trade strategies. More specifically, Apollo's direct investment abroad strategy represents a great combination of Mode 3 and Mode 4; Apollo's medical business process outsourcing strategy can be seen as the application of Mode 1 and with minor support of Mode 3; Apollo's strategy of offering international consulting services is accomplished through Mode 4, whereas its strategy in running medical tourism business shows the case of how Mode 2 is implemented with the minor support of Mode 3.

3.3.2 Fortis' approaches to global markets

Fortis Healthcare started its first hospital in 2001, and it has become the second largest for-profit corporate hospital group in India since 2007. In particular, with the acquisition of Escorts Hospital in 2006, Fortis is regarded as one of the largest healthcare systems in the world by number of procedures. Fortis refines many protocols imported from the west for the Indian market. As well, it makes significant investment and partners with leading

western healthcare groups, in order to build up current best practices, mechanisms and supported IT systems (Herzlinger & Virk, 2008).

Fortis decided to enter the international market based on the following rationales: (1) international patients typically yield more profit than local patients; (2) Fortis perceives its competitive advantage as low cost coupled with high quality care and world class outcomes on a high volume of procedures; (3) Fortis' excess capacity resulting in under-utilized facilities (Herzlinger & Virk, 2008).

To improve its competitiveness and attractiveness in the worldwide market, Fortis identified its focus target destinations and applied the following actions: (1) cultivating relationships with institutions in the US, Europe and the Middle East, hoping that foreign governments could enable Fortis to become an extension of domestic health care networks; (2) cooperating with medical tourism agencies, based in the US, UK and Canada, which routed patients to Fortis for a commission; (3) establishing direct billing relationship with some international insurers to provide cashless medical care to their subscribers; (4) signing contracts with the NHS under which Fortis' physicians could conduct a fixed number of operations in India for British patients, or fly to the UK with their team to conduct surgical procedures; (5) leveraging referrals made by Indian doctors in the US (Herzlinger & Virk, 2008).

After taken the above efforts, Fortis entered international markets through two major strategies, in order to fulfill different needs in different target areas and to leverage its core competence: (1) building an emergency cardiac center in Afghanistan, and (2) developing medical tourism business with supportive actions (Herzlinger & Virk, 2008).

From the very nature, these two strategies applied by Fortis also demonstrate how Fortis applied and combined these four modes of GATS. More specifically, Fortis built its service site in foreign countries successfully mainly through Mode 3, whereas Fortis realized its medical tourism business realized by applying Mode 2 with minor support of Mode 4.

4. Approaches to co-creating value and corresponding entry mode

Based upon the aforementioned cases, we see value co-creation as a key factor for service providers penetrating into new, foreign markets successfully. In particular, new service providers can look for opportunities for value co-creation through both local service providers and local patients.

We start with elaborating how to connect different modes of service trade to create strategies for value co-creation between providers and customers through the two Indian cases. We then summarize possible types of value that can serve as a co-creation basis for these two types of customers; the corresponding targets, conditions, approaches and detailed information are also identified. Additionally, we do a pilot survey on Taiwanese hospitals for concept validation. Finally, we match these value classes with the corresponding modes of service trade proposed by GATS.

4.1 Value co-creation with service providers

In terms of value co-creation with local service providers, business-to-business (B2B) is the major type of relationship between two parties. It is seen that the typical types of value co-creation arise mainly from the enhancement of current business competencies for domestic healthcare service systems.

Table 3 summarizes the types of value co-creation, and their corresponding features and practices in the B2B context. According to the table, three types of value co-creation with service providers on service trade are identified: cost reduction, service quality improvement and long-waiting queue resolved. When the target is taken into account, we find that these three types of co-created value are appreciated by different target countries: the healthcare service providers in developed countries may welcome foreign service providers that can bring any of the three types of values to them, while less-developed countries may appreciate those foreign service providers that can bring the value of capability improvement to them. Moreover, not surprisingly, the three types of co-created value in B2B context also call for different entrance strategies and pre-conditions, as shown in Table 3.

	Type 1	Type 2	Type 3
Major targets	Developed countries	Developed & less developed countries	Developed countries
Types of co-created value	Cost reduction / efficiency improvement	Quality assurance / capability improvement	Problem solving for the system challenges / Long-waiting time resolving
Strategies for entry	Process standardization Willingness to outsourcing	(Resource) exchange and leverage between each other	Resource expansion (by building partnerships)
Pre-conditions	Standardized process / activity Clarification of each party's responsibility Feasibility of replacing current activities with ICT applications	Clarification of each party's responsibility Capabilities for problem solving / with reputation	Willingness for service payers taking the responsibilities Recognized service quality and price
GATS modes applied	Mode 1 & 2	Mode 1, 3 & 4	Mode 2
Applied primary activities in front stage	Patient movement	Long distance diagnosis Set up sub-branches, including after-care service	Patient movement for referral or transfer
Applied primary activities in back stage	Tele-medicine Call center Remote diagnosis	Tele-medicine Remote diagnosis	Remote diagnosis
Applied supportive activities	Outsourced electronic transcript	Plan / consultancy services Staff training programs (thus driving Mode 2)	Information transparency

Table 3. Types of value co-creation with service providers on service trade

We now turn our focus on how these three types of value co-creation affect in applying GATS modes and in changing of value chain activities. For those pursuing for value co-creation on cost reduction aspect, it may be either realized by moving patients abroad (Mode 2) or by outsourced the supportive and back-end activities abroad. For those regarding service quality improvement as the core for value co-creation, it can be made by utilizing those capabilities abroad directly (including doctors and back-end services; Mode 1) and by pulling foreign sources into domestic places (Mode 3 and Mode 4). As for those regarding solving the long-waiting queue problem as the primal goal for value co-creation, building a new service channel for easing the bottleneck may be the most efficient practice, which calls for an integrated solution leading current patients going abroad through referral or transfer system and with same guarantee in service quality and after-care services (Mode 2).

4.2 Value co-creation with customers

In this case, most situations are business-to-customer (B2C) rather than B2B. The types of value co-creation are mainly derived from fulfilling end customer needs through creating much greater service scope or utilizing ICT applications. Table 4 summarizes the five possible types of value co-creation, and their corresponding features and practices.

According to Table 4, we identify five types of value co-creation with end customers/patients on service trade: (1) holistic experience, (2) value-added services, (3) higher service level (in quality), (4) cost down, and (5) elimination of waiting time for receiving services. When the target is taken into account, the corresponding targets of each type in sequence are: (1) rich people willing to having new experience, (2) people going for travel with extra health service needs, (3) rich people care basic health, (4) people without enough medical insurance but need certain services, and (5) people unwilling to wait and with limited budget for receiving the service. Moreover, the five types of cocreated value in B2C context call for different entrance strategies and pre-conditions (see Table 4).

We now turn our focus on how these five types of value co-creation affect in applying GATS modes and in changing of value chain activities. In contract to the B2B context, although different target customers pursue different goals for value co-creation, most of the individual needs are all satisfied through Mode 2, with minor support of Mode 1 and Mode 3. This is mainly because different combination of travel and healthcare services can shape different service packages that bring different values to customers (e.g., health tourism, medical tourism, medical travel, and wellness tourism). As well, in the B2C context, it is hard for service providers to generate interfaces for value co-creation with individual customers mainly through unperceived key service activities. Thus, except for primary activities in front stage, primary activities in back stage and supportive activities are not the focus for service trade implementation in this regard.

4.3 Pilot survey on Taiwanese hospitals

To have further understanding on how hospitals treat and perceive on modes of service trade, this study held a pilot survey on Taiwanese hospitals. Most of the measures were adapted from Cicic et al.(2002), Erramilli et al.(1995), and Fischer et al.(2003); whereas the focus was put on the actions, intentions, purposes and concerns of these hospitals' decisions on service trade mode selection. Within the questionnaire, the measurements were designed with 7-point Likert scale (1= strongly disagree, 7=strongly agree). The whole survey process ran through July 2010 to September 2010. The questionnaire was distributed to the task

owners of the 30 Taiwanese hospitals that join the medical travel promotion project initiated by Taiwanese government. We received 24 respondents in total finally, while only 23 respondents were validated.

	Type 1	Type 2	Type 3	Type 4	Type 5
Major targets	Rich people willing to experience (Wellness tourism)	People going for travel (Health tourism)	Rich people care basic health (Medical tourism)	People without enough insurance (Medical travel)	People unwilling to wait and with limited budget (Medical travel)
Types of co-created value	Holistic experience	Value-added services	Higher service level (in quality)	Cost down	Elimination of waiting time for receiving services
Strategies for entry	Co-create new service climate	Add services to service stakeholders	Deliver reputation service quality than domestic players	Deliver cheaper but qualified services	As current providers' partners for resource expansion
Pre-conditions	New experience and free of risks	Capability of bundling extra services into existing packages	Reputation with customized guarantee (e.g., privacy)	Clarification of each activity's responsibilities	Clarification of each activity's responsibilities
GATS modes applied	Mode 2 (supported by Mode 1 and 3)	Mode 2 (supported by Mode 3)	Mode 2 & 3 (supported by Mode 1)	Mode 2 (supported by Mode 1 and 3)	Mode 2 (supported by Mode 1)
Applied primary activities in front stage	Customer movement Call center Set up sub-branches	Customer movement Set up sub-branches	Customer movement Set up sub-branches Remote diagnosis	Customer movement Call center Set up sub-branches	Customer movement

Table 4. Types of value co-creation with customers on service trade

Our results show that all the respondents prefer Mode 2, and regard this mode as an important mode for service trade (5.35). Meanwhile, most of the respondents (22/23) practice Mode 4 and rank it as the most important mode for service trade (5.44); one possible explanation is that hospitals may benefit significantly from the international medical aid programs in recent years and the short-term staff exchange programs. In contrast, Mode 3, the most common practice in manufacturing industries, is found less applied (8/23) and less interested (4.03) by the respondents. As for Mode 1, even though half of the respondents (12/23) have applied in order to offer services to both foreign customers and foreign

institutes, this mode is found hardly being popular unless both deregulation (in Taiwan) and the perceived importance (4.48) being resolved.

We then take an analysis on key factors behind the decision on service trade mode selection. According to our finding, insufficient foreign market information, regional regulations, and perceived investment risks (which including both sunk cost and probability of successful market penetration) are found critical for those hospitals in determining the modes for service trade. Meanwhile, the degree of internationalization of the firms and the degree of value chain connections with global markets for the healthcare industry are far behind the case of manufacturing industries. It may imply that an immature global service chain may lead firms less interested in adopting Mode 3 practices. That is, these interviewed hospitals with less experience in globalization prefer start their first business trial and design through B2C or B2B2C approaches, rather B2B ones.

Similar patterns can be also found from the analysis on service offering and goals of the respondents. According to the survey, these respondents regard service innovation and new market exploration as the two major purposes for service trade trial. However, when the emphasis is put on value positioning and service offering, the respondents are found tend to serve as direct healthcare service providers (rather supporters of regional hospitals), thus being more likely regarding current regional service providers as competitors (rather co-opetitioners). In other words, the respondents may design business models based on both B2B(2C) and B2C practices, putting most of their emphasis on value co-creation with end customers.

Consequently, findings of this pilot research tend to reveal that concerns on value chain and co-opetition with service providers (the supply side), and interests on selected targets on need identification and value co-creation (the demand side) may influence each other interactively, thus having impacts on the determination of the appropriate modes for service trade.

4.4 Linking value co-creation and entry modes

According to Table 3, Table 4 and the findings from our pilot survey, we found that a provider can generate extra value/revenues by two means: (1) creating extended healthcare business lines, which is B2B oriented, and is especially achieved through the extension of supportive and back-end activities), and (2) generating new customer base, which is B2C oriented and is especially achieved though tourism and local reach. Moreover, these two means are highly related to the mode of service trade. On the one hand, for those who are interested in creating new business lines, they may emphasize on developing practices through Mode 1 and Mode 4. On the other hand, for those who want to focus on earning new customer base, they may start their service trade business by Mode 2 and Mode 3.

Additionally, with regard to the challenges / barriers of applying each mode of GATS, they may have strong links with the competence of new service providers. Here, we make the following statements based on the aforementioned study. For service providers applying Mode 1, they have to make sure that they have strengths in ICT applications and are able to make major activities standardized and modulated. For service providers applying Mode 2, they have to make sure that customers are willing to move, free from legal concerns, waiting for after-care services, streamlined referral and payment systems. For service providers applying Mode 3, how to optimize the degree of movement of current value chains and how to lower customers' psychological distance become vital. While for service providers

applying Mode 4, utilizing existed links between parties and leveraging the comparative profession would be the basic conditions.

Finally, value co-creation can be realized by fulfilling the needs of either domestic providers or customers. Most importantly, we found that the traditional model of globalization (i.e., Mode 3) is not the only or major mode for service trade (at least in the case of healthcare industry). It may imply that value chains can change into different shapes to fulfill the kernel needs of each service trade mode, thus creating more flexibility for service providers in designing their delivery systems based on their core competencies and strategies. Thus, based on the above arguments, we draw our hypothetical model for service mode determination as illustrated in Figure 3.

The findings suggest that a firm should first deploy the industry value chain it belongs to when it wants to penetrate foreign markets. A firm may then identify the needs of the target customers (including both domestic service providers and receivers) through value co-creation and identify its own competence for entering into foreign markets. Both value chain analysis for the supply side (inside-out) and value co-creation analysis for the demand side (outside-in) should be applied in the mean time, and then came the alignment direction through fit/match analysis. Finally, by taking into account the features of the industry value chain, a firm can determine the most appropriate mode (and the corresponding routes if necessary) for service trade by following the GATS framework.

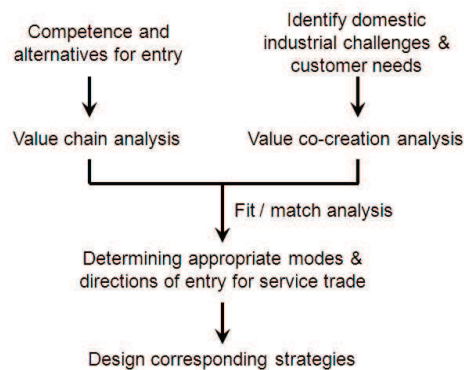


Fig. 3. Determining appropriate modes for service trade: the logic model

5. Findings and conclusions

The trends toward the service economy and globalization have made service trade a crucial issue for most service sectors. However, current analytical models relevant to service trade provide little guidance on linking service types and customer needs of targeted foreign countries, unfortunately.

This article, therefore, is interested in identifying patterns of service trade through the lenses of value chain analysis and value co-creation, and in understanding how these align with the modes of service trade proposed by GATS. We also pay our attention to the roles a service provider should take when entering a new market, as well as the key issues that may impede the attempt for going global from a service provider's viewpoint. This article starts with a deductive approach and demonstrated by cases in the healthcare industry in Asia.

We believe that the selected service sector and corresponding targets in Asia is worth taken as the benchmark for exploring the service export issue.

We first examine two case studies in the international healthcare industry. Based on the analysis, we found that service trade, in contrast to domestic service, implies that new service providers can seek opportunities for foreign market entrance in two ways: through the needs of current service providers (mainly B2B), and through the needs of service receivers (mainly B2C). With regard to the entry mode, in addition to foreign direct investment (FDI), new service providers can also position themselves as part of the current chain through their own competencies. Some of the patterns are seldom mentioned or proposed in previous internationalization studies targeting on manufacturing industries.

We suggest that when a service firm wants to penetrate into foreign markets, it should first deploy the industry value chain it belongs to, and then identify the needs of the target customers (which include both domestic service providers and receivers) through the filter of value co-creation. By taking into account the features of the industry value chain, a service firm can determine the most appropriate mode (and the corresponding routes if necessary) for service trade by following the GATS framework.

Further, this article examines the previous findings by a survey on hospitals in Taiwan. Findings of the survey helped strengthen our propositions by comparing with the current actions, future plans and perceptions on service trade of the respondents. As well, in-depth information about barriers for service trade helps to explore the gaps and patterns on value chain and value co-creation of those respondents.

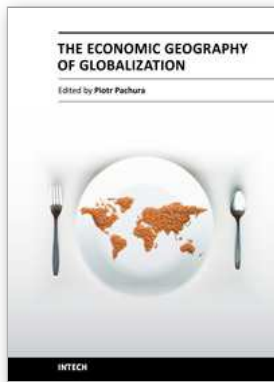
In summary, we have demonstrated that value co-creation is a valid construct in the context of service trade. We also have argued that, even before considering value co-creation, the best way for new players to provide and deliver services in the service trade context is to gain more in-depth understanding of the overall value chains, rather than merely relying upon the design of the service interface / encounter.

Finally, owing to the limitation of number of cases and that of industries, we suggest future studies that conduct in-depth, quantitative analysis of the global healthcare industry, or apply the model to other service industries, so as to generalize and validate the proposed logic framework.

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Very often the process of globalization is referred the word economy evolution. Often we measure and study globalization in the economic relevance. The economy is possibly the most recognized dimension of globalization. That is why we see many new phenomena and processes on economic macro levels and economic sectoral horizons as well as on specific "œgeography of globalization". The book *The Economic Geography of Globalization* consists of 13 chapters divided into two sections: *Globalization and Macro Process* and *Globalization and Sectoral Process*. The Authors of respective chapters represent the great diversity of disciplines and methodological approaches as well as a variety of academic culture. This book is a valuable contribution and it will certainly be appreciated by a global community of scholars.

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