

## Business Model of Jamu as Indonesian Traditional Herbal Medicine in New Economy

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**Abstract.** *Many firms in New Economy tend to depend more on intangible resources (i.e. knowledge and information) than tangible resources as in Old Economy. This shifting has made many firms favour the information technology for their daily business conducts today. The fast spreading of information leads to the fiercer competition than before. The great recognition of intangible assets somewhat calls for the notion of a new business model. Some enterprises and researchers expect this effort may generate more value for today's competition through combining all assets in proper judgments. Jamu, Indonesian traditional herbal medicine, also cannot avoid the impact of New Economy competition. Jamu enterprises need to preserve the traditional value in the midst of the modern lifestyle. Then, the urgency to maintain Jamu competitive advantage is felt necessary. To provide the new business model of Jamu that is deemed as appropriate in New Economy's competition is the aim of this study. Through analysing various literature, the authors heavily consider Product Service System (PSS), specifically the product-oriented type to construct a new business model for Jamu.*

**Keyword:** Jamu, new economy, PSS, product-oriented, business model

### 1. Introduction

The term of New Economy is created to depict the condition of economy activities relying on intangible assets, not solely on tangible assets as previous days. Due to the globalization and high technology, tangible assets are deemed not enough to obtain competitive advantage for the firms. Hayes (2002) held that intangible assets (e.g. knowledge, information) played as a key for having business more productively in New Economy. Thus, the seen outcome is that the development of information technology is growing rapidly (e.g. internet, software development, media of telecommunication, etc.). Realizing the necessity to adjust with New Economy's competition environment, many enterprises and researchers put their concerns to have new business model. In the late 1990s, these new business models were highly found in IT business sector, known as e-business (Amit & Zott, 2001).

As result, this situation created the impression that New Economy was somewhat more related with IT which offering value in service sectors. However, the authors carry other concern of New Economy's impact related with information technology usage in product sectors.

*Jamu* is Indonesian traditional herbal medicine has been used for many centuries in Indonesia to treat disease and maintain good health (Elfahmi, Woerdenbag & Kayser, 2014). Today, the technology of pharmaceutical is far more developed than previous days, such as biopharmaceutical, chemical-based drugs, etc. However, *Jamu* is struggling to survive in today's business while preserving the traditional value in the midst of the modern lifestyle. Business of *Jamu* is counted as product sector since it mainly provides physical product, *Jamu*, so that the customers can gain the value by consuming *Jamu*. Recognizing the fierce competition of New Economy, the authors posit that *Jamu* business needs to be adjusted through

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proposing new business model. However, the existing researches have not studied this issue yet. The authors find it as the research gap that is deserved to be examined further. In constructing new business model for *Jamu*, the authors heavily consider Product Service System (PSS) concept. At first, the reasons for facing the environmental issue and meeting the customer's value existed to develop PSS. Apparently, both reasons further lead to sustainability issues (Roy, 2000; Isaksson, Larsson & Rönnbäck, 2009; Tukker & Tischner, 2006). Basically, this concept combines between product and service as elements of system that interact each other in pursuing to meet the customers' final needs (Goedkoop, van Halen, te Riele & Rommens, 1999). Customers can perceive PSS as system solutions, while the enterprises find PSS as a higher degree of responsibility to customers Mont (2001). Looking at the idea of PSS, the authors adopt PSS to propose new business model for *Jamu*.

Introducing new business model of *Jamu* by adopting PSS concept to deal with the New Economy competition environment is what this paper is aiming for. To provide better explanations, this paper is set up in five sections. The second section mainly talks about literature reviews about New Economy, business model, and PSS. The detail of the method of this study is disclosed in the third section. The propositions related with new business model of *Jamu* are explored in the fourth section. The fifth section, the authors discuss the difference between this study and the previous researches. Meanwhile, the last section summarizes some highlights of this study.

## **2. Literature Study**

### *New Economy*

Many enterprises and researchers have agreed no unanimous definition of New Economy until today. Tapscott (1997) did plausible attempt to present the idea of New Economy by delineating 12 themes considered to be relevant. Some themes that may be relevant with this study are:

knowledge, digitization, integration/ internetworking, disintermediation, innovation, immediacy and globalization.

Meanwhile, Hayes (2002) argued similar opinion about New Economy with Tapscott. He found that New Economy made the intellectual (i.e. information and knowledge) gains more acknowledgements as the important asset in business than the physical as before. In addition, Boulton, Libert, and Samek (2000) believed that the intangible assets (e.g. relationship, people, brand, etc.) were the main assets to create value in today business. As some researchers noticed that intangible assets in business valuation gained more weight over the tangible, the authors stand on more specific belief. Information is the intangible asset should be highlighted in this study. This belief is supported by Agatstein, Rieley & Khan (2000). Agatstein et al. (2000) noted that today the decision making process is faster, yet the demand of accountability is increasing. Thus, holding feedback process in decision making will help the firm to be closer with the success in New Environment's competition. In other words, today business is becoming more info-centric.

### *Business Model*

Only little researchers took interest to examine the business model further so that it does not come as the favourite topic for being researched for (Johnson, Christensen, & Kagermann, 2008). As business model sounds interchangeably with the term of strategy, both have underlying difference (Magretta, 2002). Her perspective towards business model is explained as the system that the elements are fit one to another. It only explains the logic of how business conducted. Yet, the competition factor is not included in constructing business model. Strategy is the one mainly deals with the competition; through competitive strategy the enterprise knows how to act differently with its competitors. It is easier to copy the business model, but the strategy is not. Nonetheless, by having a business model the firm will have some more explicitly expressed choices.

Then, it will help the firm to take decisions in a more organized way and support the implementation of strategy. In addition, some researchers had presented the details of a business model must have, though they had different terms one to other. Teece (2010) posited that business model is about what value we will offer to customer, how to deliver it, and how to make profit from making value for customers. The recent notable business model is Business Model Canvas. Many people use this business model template since it provides specific points as making a business model.

Osterwalder & Pigneur (2010) established nine important aspects of Business Model Canvas to ease devising the business model. These aspects are mainly divided into two big parts: part related providers (key partners, key activities, key resources, and value proposition) and part related customers (customer relationships, channels, customer segments, cost structure and revenue streams). A little different from the work of Osterwalder and Pigneur (2010), Johnson et al. (2008) had four interlinked elements might be existed in business model, namely: (1) Customer value proposition (CVP), (2) Profit formula, (3) Key resources and (4) Key processes. However, CVP stands as the foundation of business model since the rest of elements should be designed following it. The more accurate the firm by capturing the customer's problem, the better solution the firm possibly to offer, the greater the CVP.

The necessity to adjust the business model with the business environment will emerge in order to preserve the firm's competitive advantage (Boulton et. al, 2000; Voelpel, Leibold & Tekie, 2004). As dealing with the high uncertainty in New Economy's competition, many enterprises felt uneasiness feelings for being confident to conduct their businesses. In 1990s, the emergence of internet made the business model gained great development, called as e-business (Osterwalder, Pigneur & Tucci, 2005; Magretta, 2002). At that time, using internet in daily business could be counted as the recent innovation.

They expected for gaining more profit due to the decreasing of Transaction Cost Economies by having internet usage (Amit and Zott, 2001; Osterwalder et al., 2005). In this study, we keep in mind about the role of business model by covering the logic of how to conduct a business. Still we assume this concept is not enough since it only serves as generic template or guideline to conduct a business. Therefore, we decide to adopt certain perspective, Product Service System, which should be useful to enrich the business model in New Economy's competition.

#### *Product Service System (PSS)*

PSS lately comes into business conduct with some varied drivers. First driver is that the environmental issue which encourages people to act more wisely in providing and choosing a product or service (Roy, 2000; Goedkoop et al., 1999). The urgency to meet the customer value while optimizing the resources has shifted the firm's orientation toward function is the second driver of PSS (Isaksson et al., 2009). Nonetheless, both drivers actually end to the bigger issue, sustainability (Tukker & Tischner, 2006). Beuren, Ferreira and Miguel (2013) stated that the objective of PSS is that offering other way in product use beyond acquiring it in order to curtail the consumption of products. Car sharing concept that is discussed by Kang and Wimmer (2008) is the instance of PSS. Furthermore, Geng, Chu, Xue and Zhang (2010) believed PSS enables a firm to increase its competitiveness and gain more profits.

Goedkoop et al. (1999) defined Product Service System as "[a] marketable set of products and services capable of jointly fulfilling a user's need." In other words, basically in PSS the product and services are integrated to meet customer's final need. There are different meanings of PSS between customers and producers as well as the service providers. Mont (2001) found for customers PSS is that system solutions which made they not merely buy a product but also a service. Meanwhile, the producers and service providers may see PSS in different way. They believe while implementing PSS it

means greater responsibility for the life cycle of product, involve the customers in designing the PSS and devising the closed-loop system (Mont, 2001). Further, Tukker (2004) developed the business models from PSS concept. He argued that PSS business models can bring good impacts on

competitiveness because it offers more integrated solution for customer, allow the firm to strengthen the relationship with customer, and firm can innovate faster. Figure 1 depicted the business models in PSS:

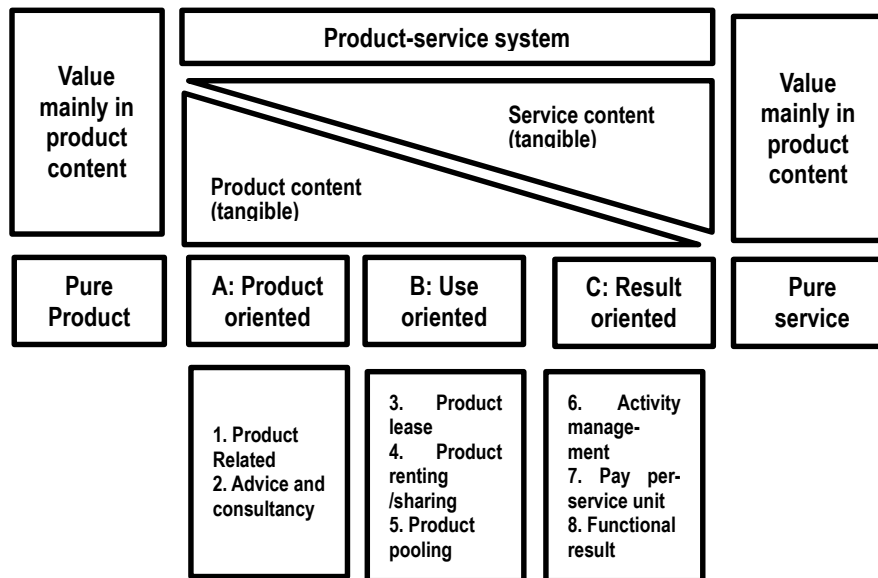


Figure 1. Categories of PSS Business Models (Tukker, 2004)

The below descriptions of previous business models mainly refer to the works of Tukker (2004) and Reim, Parida & Ortqvist (2015):

*Product-Oriented*

This business model still places selling products as their core business, but it is also attached with extra services. For the instances are the services offered by the provider to customers throughout the lifecycle of the product (Sundin and Bras, 2005). The firm will gain more revenue for the services taken by customers. Tukker (2004) divided this type into two more specific types: (1) Product related service (2) Advice and consultancy. Though those two types are originated from the same business model (i.e. product oriented), the difference still underlies between those. The service in product-related service is more associated with its use throughout its lifecycle, as the instances: the maintenance, the supply, take-back of product, etc. Meanwhile, the advice and consultancy type puts more concern about the efficiency use of product for customers.

*Use-Oriented*

The character for this category is the provider holds the ownership of the product, yet the customers can still use the product through sharing with other customers. In other words, the physical product is not sold to customers and the responsibility of the product is bore by provider. Furthermore, Mont, Dalhammar, and Jacobsson (2006) conducted a study relating this. This type may be categorized further into (1) product lease (2) product renting or sharing (3) product pooling (Tukker, 2004). The existence of unlimited access for customers in product lease cannot be found in product renting or sharing. Meanwhile, in product renting or sharing, the sequential uses among customers happened. The product pooling is similar with product renting or sharing in terms of the limited access, yet the use is feasible to be done simultaneously among customers.

*Result-oriented*

The provider will be paid over the results the customers gain for. In the beginning, both

parties agree upon the results preferred by customers. Then, the provider is free to determine what specific products are used to achieve the results. Meanwhile, the customers will pay only based on the results. Reim et al. (2015) provided an instance of cleaning service for this business model. The further categories in result-oriented determined by Tukker (2004) are: (1) outsourcing (2) pay per service unit (3) functional result. The common example of activity management/outsourcing is the outsourcing of cleaning or catering activity in a company. For the pay per service unit type, the

customers do not purchase the product but only the output of product (i.e. pay per print business). The functional result is similar with activity management, but the provider has high freedom in defining the means to deliver the results to customers. There will be no pre-determined specified means between provider and customers. For example: the provider offers the ‘pleasant climate’ than offering only cooling equipment to customers.

Comparing the business models in PSS to distinguish them easier, it was shown at the work of Reim et al. (2015) as table 1 below:

Table 1.

*Comparisons of Business Model in PSS (Reim et al., 2015)*

	<b>Product-oriented</b>	<b>Use-oriented</b>	<b>Result-oriented</b>
Value creation	Provider takes responsibility for the contracted services	The responsibility of provider lies on the usability of the product or service	Transferring the results to consumer is the responsibility of provider
Value delivery	Provider trades and services the sold product and service	Provider makes certain the usability of the physical product as well as service	The result delivered by the provider
Value capturing	Consumer purchase the physical product and for the services being carried out	Repeated payments by customer (e.g. leasing)	Consumers pay for the result delivered by provider

*Jamu*

Indonesia is a country with diversified plant species which around 2500 species are potentials for medicinal plants (Elfahmi et al., 2014). In herbal medicines, Indonesia classifies it into three types: (1) *Jamu*, (2)

Standardized herbal medicine and (3) *Fitofarmaka*. The characteristic of each type is revealed in table 2 (Regulation of Head of National Agency of Drugs and Foods Controls No. HK.00.05.41.1384):

Table 2.

Indonesian Herbal Medicines Characteristics

Indonesian Herbal Medicine	Characteristics
<i>Jamu</i>	Traditional natural medicine whose effects are proven through empirically based, not scientific based
Standardized Herbal Medicine	Natural medicine whose effects and safety are proven by scientific based (preclinical test) as well as the raw material is standardized
<i>Fitofarmaka</i>	Natural medicine whose effects and safety are proven by scientific based (preclinical and clinical test) as well as the raw material is standardized

According to Regulation of Ministry of Health no. 6 issued in 2012, *Jamu* is allowed to be sold by industry level (i.e. *Industri Obat Tradisional*) or SME level (i.e. *Usaha Kecil Obat Tradisional*, *Usaha Menengah Obat Tradisional*, *Usaha Jamu Racikan* and *Usaha Jamu Gendong*). Those *jamu* enterprises level differ from one to another in term of types of allowed dosage forms to be produced for. *Jamu* has been practised for longer time though it has not carried out the preclinical or clinical test as other Indonesian herbal medicines. Still many Indonesians are willing to consume *jamu* for their daily consumptions (Torri, 2013).

Recognizing this situation, Indonesian governments put their interests to increase Indonesia's GDP through herbal medicines, including *Jamu*. For instance, the turnover of *jamu* in domestic market in 2013 achieved IDR 13 trillion. Then, the increase about IDR 2 trillion was also expected in the late of 2014 (Ministry of Trade, n.d.). On the other hand, the trend of back to nature will encourage people to consume herbal medicines, including *jamu* (Ditjen PEN, 2014). Nonetheless, the case of additional of chemical substances in *jamu* deliberately (BPOM, 2006; KOTRANAS, 2007) may ruin the safety aspect of *jamu*. This contradicts with the branding of *jamu* for being recognized as natural herbal medicine. Somehow, this issue indirectly impacts on market's perception that *jamu* is not safe to be consumed as expected. Besides that, the competition in medicine sector (i.e. Traditional Chinese Medicine, *Kampo*, chemical-based medicine) becomes fiercer due to the development of technology today.

Confronting the today's unpredictable competition environments, we believe as *jamu* enterprise has innovation then it may be survived. In dealing with this issue, this study provides the new business model of *jamu* enterprise using PSS concept.

### 3. Methodology

The authors used online searching to collect the literatures for this paper. The process of collecting the literatures was conducted about five weeks, in March-May 2017. We examined Google Scholar, Proquest, Elsevier, Web of Science and Science Direct to obtain the literatures. In order to gain the relevant literatures, the authors used some keywords, such as: New Economy, Information Technology, Product Service System, Business Model, *Jamu* and *Jamu* business model.

### 4. Finding and Discussion

The valuation in New Economy is placed more on intangible assets than tangible. This study favours specifically the information since it serves as the foundation of other intangible assets. The useful information can be developed into knowledge helping the firm to conduct the business in New Economy. Decision making in fast and accountable way also become possible if the firm has more accurate information. Accordingly, we acknowledge carrying a new perspective of information in the logic of how to run a business (business model). Every business sector should adopt this new

perspective, though the level of necessity and impact may be varied in each sector.

*Proposition 1: New Economy encourages the Jamu enterprise for taking up information aspect as new perspective in its business model.*

Only figuring out the notion of business model does not accommodate *Jamu* enterprise in confronting the changing of New Economy. Redesigning the business model by including the presence of information can be met as adopting the PSS. The seeking of sustainability for a firm is the main reason to develop PSS. PSS establishes the product and service both to interact as the elements of a system for offering a set of solution to customers. The element of service can accommodate the process of giving information from the firm to customers and getting feedbacks from customers to firm.

Meanwhile, this approach cannot be done while in the past the *Jamu* firm only selling a product of *Jamu*. PSS creates the direct interaction process between customers and firm, then enabling the process of information exchanges. For customers, they may gain deeper beneficial information regarding *Jamu* and health. On the other hand, the firm may access the customers' information such as: the ailment the customer is troubling with, the feedbacks for its product, etc.

*Proposition 2: To develop new business model of Jamu, the PSS concept can facilitate the exchange of information between firm and customers.*

Reflecting on PSS business model as Tukker (2004) portrayed, *Jamu* enterprise is suitable to adopt the Product-oriented business model. Principally, as the customers obtain the solution over their health problems is what has become the objective of consuming *jamu*. It means the full ownership of *jamu*

product is the customer's in order to enable the customer experiences the benefit of *jamu*. The firm does not hold any ownership of *jamu* after the transaction between firm and customer has been done. Furthermore, the *jamu* enterprise originates from product sector. As previously stated, the service element of PSS in *Jamu* business model may account in the information exchange between firm and customer.

We propose two possible forms of service in PSS which may *jamu* enterprise offer: (1) the health information for customers regarding *jamu* and (2) comfortable place for customers as consuming *jamu*. Giving the customers more knowledge of *jamu* consumptions relating with their health issues may offer something valuable for the customers beyond consuming *jamu* only. In addition, *jamu* enterprise may explore the customers' information to keep updating the most common ailments of customers. Thus, the firm indirectly may gain more access of information to develop the existing *jamu* or have new kind of *jamu* to be offered to customers. In other words, the firm may freely access the feedbacks from customers regarding the products.

This idea is aligned with Agatstein et al. (2000) who believed the feedback in business process is somewhat crucial in conducting business in New Economy. As for the comfortable place, it may help the customers to feel more relaxed while consuming *jamu*. The customers may take longer time for staying in *jamu* outlet. This thing aims to increase the attachment of customers to *jamu* enterprise. Mostly, both forms of service as proposed accommodating the flow of information happened between firm and customer. Besides, Mont (2001) noticed that as a firm implementing PSS then the relationship between customers and firm will improve.

Table 3.

Product-Oriented PSS Business Model for *Jamu*

	Definition (Reim et al., 2015)	Example
Value creation	Provider takes responsibility for the contracted services	<i>Jamu</i> firm provides <i>jamu</i> which meets the customers' needs (e.g. attractive package design, better taste, quality of <i>jamu</i> , etc.)
Value delivery	Provider trades and services the sold product and service	<i>Jamu</i> is sold directly by the firm in a café which is equipped with modern facilities, pleasant ambiances; The firm educates the customers about <i>jamu</i>
Value capturing	Consumer purchase the physical product and for the services being carried out	The willingness of customer to pay more (e.g. due to the quality of product, the comfortable place). The increasing frequency of customers' visits

Realizing the number of researches examining specifically about *jamu* and New Economy are low, this study attempts to fill in that research gap. This study differs with the previous researches since it provides more detailed idea of *jamu* enterprise to run the business in New Economy. Having a new perspective of information implemented in new business model of *Jamu* brings different color than other previous researches. In addition, to accommodate the new perspective (i.e. information) we choose to adopt PSS concept which towards the sustainability of firm.

## 5. Conclusion

New Economy has provoked the key assets from tangible to intangible assets. Being aware of varied intangible assets, this study perceives information aspect as the basis of intangible assets. By having more information, the decision making process in daily business practices may be done faster and more accountable. This assumption not only applies in service sector, but also the product sector, including *jamu* enterprise. Therefore,

the new perspective of information's role in business conduct should be modified as the new business model. PSS concept may accommodate the implementation of adopting information in new business model of *jamu*. After considering the characteristics of *jamu* enterprise, product-oriented business model in PSS is the appropriate business model for *jamu*.

The managerial implication of this study is mainly to offer the idea for *jamu* enterprise for being survived in the competition of New Economy. By the mean of adopting PSS as a set of solution for customers, the firm may move closer towards sustainability. Meanwhile, this study provides theoretical implication in a fashion of expanding the researches of business model of *jamu* enterprise while considering New Economy background. However, this study still has some limitations for not providing the tests of propositions offered and low generalizability of findings since it only covers *jamu* business. Therefore, we encourage the future researches to conduct any qualitative and quantitative methods for having more comprehensive findings.



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