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Industrial Engineering

CLASSIFICATION MODELS OF INFORMATION TECHNOLOGY SERVICES BUSINESS IN INDONESIA

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Abstract - **A shift in the development of industries, from manufacturing to business services has been affecting the telematics industry. Business improvement area of telematics services in the world and the widespread liberalization efforts have resulted in Indonesia's readiness to face any competition, one of the steps that need to be done is to develop the field of telematics services business classification. This is important because the classification model of the existing telematics service business is not yet completed and detailed. Classification models based on comparative methods and expert acquisition models. Initial basic model development is the Document MTN.GNS/ W/120, because it is associated with the preparation of Indonesia towards the liberalization of the field of telematics. Model classification resulted in three main areas of business IT services namely Business Services, Communication Services and Education Services. These areas has sub-fields and the details revealed by following a structured systematic numbering, follows the numbering system KBLI. IT services business market in Indonesia is still dominated by the service system infrastructure for software category with the market performance of 46.3%, while the services segment dominated by the service implementation by 40.56%. The overall rate of growth of the IT services business in Indonesia grew by 15.8% in 2010.**

Keywords *– Model, Services , Telematics, Expert Acquisition*

Abbreviation –
Information Technology (IT)
General Agreement on Tariffs and Trade (GATT)
GATT Services Sectoral Classification list (MTN.GNS/W.120)
Standard Classification of Economic Activities Indonesia (KBLI)
Printed Circuit Board (PCB)
General Agreement on Trades in Services (GATS)

I. INTRODUCTION

Trend in the industry suggest that a shift from manufacturing to the business of business services (services). If all this traffic is dominated by exports and imports of goods, then in the coming years displaced by the service sector. The same is true for the telematics industry. According to Digital Planet Report (2008), the world telematics market is dominated by communication technology, ie by 57%, followed by the service sector (services) by 20%, hardware market sector (13%) and software (10%). And in the period 2008-2011, estimated the services sector grew by 4.4% each year.

Indonesia's participation in bilateral, regional, multilateral and free trade market, would give impact on the exchange of goods and services. On free trade which is not restricted by the barrier, it will certainly kill the domestic economy if there was no readiness of the country. Therefore it needs to made efforts to prepare domestic industry and create barriers to restrain the rate of flow from the outside.

Given the telematics industry is the mainstay industry of the future and included in one of the priority industries, it is necessary to attempt grouping of operations in the field of telematics services. Therefore, it should be done Classification Modeling of IT Services Business in Indonesia for Telematics Industry Competency Mapping.

The purpose of this study is to build classification

models so that the obtained data and a detailed and complete information regarding the IT services business to facilitate the process of grouping the IT services business in KBLI. Classification model results are then used to develop business competence of IT services in Indonesia

II. BASIC THEORY

National telecommunications device industry is an entity that not only serves as an agent / distributor / trader of the MNCs but more than that, it should also have the capability engineering (engineering), such as: Network Design & Implementation, Product / System Maintenance & Upgrades, Product / Local Adaptation System, Product / System Value Added, PCB Assembly and Research & Development. These capabilities do not have to have all at once at first, but there is a clear vision and struggle to achieve and build capacity. For more details, an outline of the telecommunications equipment industry competencies can be mapped as in Figure 1.

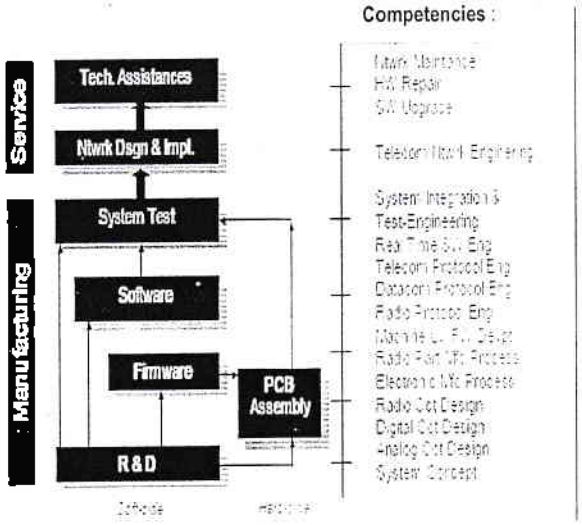

Figure 1. Basic Competency Map of Telecommunications Equipment Industry

Tjahyana (2008) mentions that in terms of the activities can be divided into two groups, namely: Manufacturing (including research and development /R & D), and Services. Competency based system described above is not easy to be realized, required an investment of both funds and human resources, also the time of the years and still have to be driven again until reaching a high level of competitiveness so appropriately referred to the core competencies. However, once this capability is achieved, it will provide very high added value for the industrialization of Indonesia.

To implement the national IT services business classifications with the cluster approach, the potential diagnosis is required, as well as build a community of IT services industry cluster are bound in the vision, mission and action plan together. In the Minister of Industry Regulation (No. 129/ M-IND/PER/10/ 2009) refers to the concept of industrial cluster development of telematics applications developed by Mastel, that the concept stage to explain the urgency and the establishment of Telematics Industry Cluster and at the same time as the foundation for diagnosis of potential national IT services business.

III. MATERIALS AND METHODS

Research methods generally shown in Figure 2.

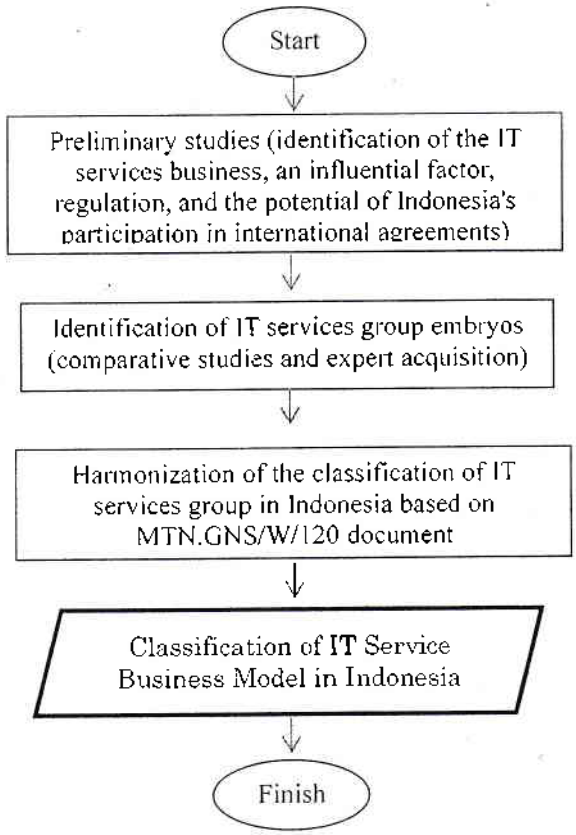

Figure 2. Research Methods

IV. RESULTS AND DISCUSSION

Telematics Industry (Information and Communication Technology - ICT) is one of the priorities that the Government will be and is being developed through the National Industrial Development Policy. Telematics industry itself is growing rapidly in the world with 6.9% growth per year. Research firm International Data Corporation (IDC) describes the growth of the IT industry during 2009, both in terms of hardware, software and services have increased in a positive, although the world economy is slowing due to the impact of global crisis.

IT market in research firm IDC on IT spending (software, hardware and services) to Indonesia in 2009 valued at USD 7.5 billion. IT spending has a positive growth of 5.5% compared to 2008 and a growth of 8.1% for 2010. For hardware, the growth rate in 2009 of 5.2% compared to 2008 and is predicted to grow by 7.1% for 2010. "As for software, the growth rate in 2009 amounted to minus 1.4% compared to 2008 and is predicted to grow by 3.0% for 2010. Transaction value of each hardware component in year 2009 is estimated at USD 6.7 billion, while for the software in 2009 is estimated at USD 285 million. But the sector is growing rapidly so that by the year 2010 achieved an average growth of 8.1% per year. Among the three components, hardware, software and services, IDC saw that the level of services growth will experience a significant improvement. Estimated at 26.5% in 2010, which for 2009 rose by 15.8% compared to 2008.

Gozali (2010) suggests that the market of Information and Communication Technologies (ICTs) in Indonesia for the years 2009 to 2011 have the profile (Figure 3).

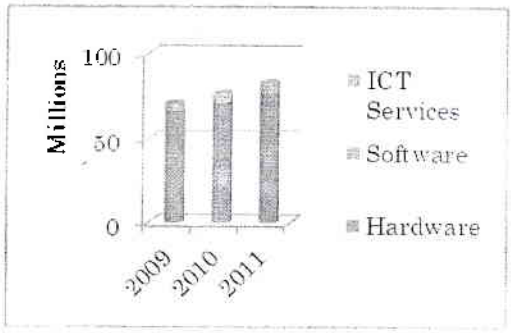

Figure 3. Indonesia's ICT Market

The determination of the scope of the IT services business based on the New Round of Negotiations (new round) in services to the WTO, which began in 2000. The constraints found in the face of trade in services negotiations, especially considering the number of sub-sectors in services involving almost all departments or agencies that are non-departmental supervisors from various sectors and sub sectors such services. Most of the services sector related to one another so that it requires close coordination between institutions. Patrons agencies usually tend to be protecting the service sector proxies. The need to build a vision that is able to cover the interest as a whole, thus enabling the formulation of strategies for optimizing certain sectors that benefit the national economy. For these activities to be supported by studies and accurate data in order to know the capacity of the national service in the face of global competition.

Besides, there are rules to complete legislation to protect the business interests of national services and provide legal certainty for both foreign and national entrepreneurs. The regulations need to be prepared in stages and adapted to national preparedness and business services are tailored to the principles of trade in services, one of which is set in the GATS.

Liberalization of trade in services is not an easy thing because it can bring unfavorable effects if not carefully prepared. Therefore, it should always be careful in every sector liberalized or sub-sectors in services trade. Related to the above Bartlett and Carmichael (2009) recommends that Indonesia should be able to use international trade business services to support national policy objectives. One initial step is Indonesia needs to focus on the

development of business services that have international competitiveness, such as Professional Services, Computer and Related Services, Services Research and Development.

The results of examination of the various systems of classification made by various sources such as IT practitioners, Chamber of Commerce, INKINDO, BPM6, EBOPS, HS, ISIC REV. 4 and the WTO becomes the basis for determining the scope of the IT Services business group in Indonesia. In general have a common classification system in determining the scope of the classification, but differences arise in the process of outlining the details of each sub-sector. Initial base as the reference preparation of the IT Services Business Group on Indonesia is MTN.GNS/W/120 document that divides the category of business services into 12 sectors. The focus of the classification of the IT services business sector focused on Business Services, Communication Services and Education Services. IT Business Services Sector coverage includes Professional Services (Engineering Services Sub-sector), the Computer and Related Services (all sub-sectors) and the Services Research and Development (Services sub-sector research and development of engineering and technology experiments). Sector coverage includes Communications Services Telecommunications Services (all sub-sectors) and Audio Visual Services (all sub-sectors). Coverage includes the Service Sector Education and other education services. Determination of the IT services group was also later adapted to other sources that are complementary. Classification Model IT Service Business in Indonesia in detail shown in Appendix 1.

Telematics industry consists of groups of goods and services, including industrial computers, industrial peripherals, communications equipment industry, software industry (software) industry, Animation, and Multimedia industry. Telematics industry is supported by the electronics industry for the supply of semiconductors, components and modules for computers and peripherals industry. For developing countries, software and services in general have a greater chance because of the relative does not require large investments in research and production support equipment. This is mainly due to more software based on a knowledgeable workforce (LSP Telematics, 2008)

Composition of Indonesia's largest Telematics industry is an industry consulting service which controls 50-65 percent of the composition of existing industries. The second position is the multimedia software industry is estimated at 30-40 percent, while the hardware industry is only 5-10 percent of the Indonesian Telematics industry. Hardware market share in Indonesia is the largest, amounting to 979.9 million U.S. dollars, followed by industry consulting services for 211.7 million U.S. dollars and the software industry for 110.3 million U.S. dollars to the value of production amounting to Rp 40.3 billion and export value reached 2.8 billion U.S. dollars and are able to absorb labor as much as 58 thousand people. (www.esrreview-online.com/lihatartikel.php?id=46,*26 Maret 2010).*

Given the composition of the Telematics industry is the largest service area of this condition needs to be examined comprehensively, to determine the factors of competitiveness are owned by Indonesian telecommunications industry, so that they can prepare themselves to confront free trade that has been broadcast since 10 years ago by the international community. Based on the Industry Cluster Development Guide Map of Priorities for 2010-2014, a national IT services group integrated in the Group of Electronics and Telematics Industry Cluster and Supporting Industries Cluster Group Iindustri Creative and Creative Industry Studies (special section Iindustri Cluster Software and Multimedia Content), which set out in the Minister of Industry No. 130/M-IND/PER/10/2009 (Ditjen IATT -Deperin. 2006)

The development of the IT services group must not be separated from the development of a business group of transactions involving Ti-kind product. Therefore the study of the condition of the national IT services business can be done through the study approaches the condition of the overall IT business. The growth of information technology markets in Indonesia (in U.S. $ million) in 2005 was 1476, in the year 2006 of 1683, in the year 2008 of 1901, in the year 2009 amounted to 2724 so that it can be said that the growth of information technology market by 15-20% per year . Indonesia 100% of ICT market in the state wide open with no restrictions except the limits of taxation and employment as well as some certification

requirements associated with the Telecommunications Software (ASPILUKI, 2010). Exposure conditions of the IT services business in Indonesia is presented in detail for each sector and sub sectors as well as included in the model of the IT services business groupings in the previous chapter. Due to the limitations of existing data it approaches the exposure conditions of the IT services business in Indonesia largely done through the identification and analysis of IT business as a whole. This is done according to the earlier statement that if the business of manufacturing or industrial hardware and supporting information technology and telecommunications have evolved, then the auto-related services business also has a positively correlated relationship.

V. CONCLUSION

Preparation of the classification of Information Technology services business in Indonesia is done by identifying the grouping models existing telematics field. The main model used is a model of grouping business services listed in the document MTN.GNS/W/120 particular field of business services, and modified by the grouping of business models other telematics field. Model grouping of IT services business in Indonesia consists of three main sectors namely business services, communications and education.

Identification and analysis of the condition of the IT services business in Indonesia is carried out as described in detail in the model, but through the telematics business approach that includes, hardware, software, telecommunications, and audio visual and multi-media content, which have converged. IT services business market in Indonesia is still dominated by the service system infrastructure for software category with the market performance of 46.3%, while the services segment dominated by the service implementation by 40.56%. The overall rate of growth of the IT jasar in Indonesia grew by 15.8% in 2009 over the previous year and is predicted to have increased by 26.5% growth in 2010. Indonesia has a significant opportunity to increase the IT services market by working on existing SMEs in the region of Indonesia.

In the face of liberalization of the field of telematics, Indonesia has had some good commitments through the WTO, ASEAN, IJEPA, ACFTA and AIFTA, but not yet fully equipped with sets of rules and national legislation perudang clear and still requires synchronization among related ministries and agencies, without violating the agreement that already exist, so as to provide clear boundaries for the offender and foreign companies.

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Appendix 1. Classification Models of Information Technology Services Bussiness in Indonesia