



# Civil Aviation in the Netherlands East Indies during the Great Depression, 1928-1934

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## Abstract

The beginning of civil aviation in the Netherlands East Indies was started by the creation of *Koninklijke Nederlandsch Indische Luchtvaart Maatschappij* (KNILM) or the Royal East Indies Airways in November 1<sup>st</sup>, 1928. As the only airline which held a monopoly to run air services in the Netherlands East Indies, KNILM had no competitor. One year after the establishment of the airline, the Great Depression occurred and caused a setback in many sectors of economy in the World and the Netherlands East Indies as well. This paper offers an overview of the creation and early growth of civil aviation in the Netherlands East Indies, and outlines some implications of the air transport in the colony during the Great Depression. The paper will be written in historical perspective by using some primary sources from the collection of the National Library of Republic Indonesia and Universiteits Bibliotheek Leiden (UBL), supplemented by magazines, newspaper, maps, and books. *Luchtvaart* and *KNILM Nieuws* were two magazines which become the official organs of KNILM and given a unique perspective into the operation of civil aviation in the Netherlands East Indies from 1928 to 1934,

**Keywords :** *KNILM, Air Routes, Civil Aviation, the Netherlands East Indies, Great Depression*

## 1. Introduction

Commercial civil aviation in the Netherlands East Indies was started with the establishment of the *Koninklijke Nederlandsch Indische Luchtvaart Maatschappij* (KNILM) or the Royal East Indies Airways Company. KNILM was officially established in Amsterdam and was inaugurated in the Netherlands East Indies on November 1, 1928. As a government company (*Gouvernement Bedrijven*), KNILM was established with the active support of other biggest government companies such as *Koninklijke Paketvaart Maatschappij* (KPM) or the Royal Shipment Company, *Bataafsche Petroleum Maatschappij* (BPM) or Batavia Petroleum Company, *Nederlandsche Handel Maatschappij* (NHM) the Netherlands Trading Company, *Deli Maatschappij* (DM), *Handel Vereneiging Amsterdam* (HVA) or Trading Association of Amsterdam. In all, over 30 companies with trading interests in the Netherlands East Indies compromised to associate as founder of the airline. The five biggest companies subsequently served as the Supervisory Board for the management of the KNILM. Given these origins, it is not surprising that one can trace a significant economic rationale running through the decisions and choices made by the airline. KNILM both represented and reflected the economic and political interests of the government.

The establishment of civil aviation in 1928 meant both the introduction of new communications technology as well as the creation of a large infrastructure in support of this technology.

With a few years, KNILM had several air routes joining a number of the major cities of Java and Sumatra, and included as well, Singapore. Alongside the development of air routes was the development of related infrastructure, including airport buildings, runways, maintenance hangars, engineering facilities, oil and petrol dumps, air traffic towers and stations, and other facilities that was needed for civil aviation. The immense popularity of the new technology meant that in spite of the onset of the Great Depression in the early 1930s, air traffic increased in terms of new routes, passengers flown, and freight carried. Civil aviation had important effects as well, including tourism, technological modernity, new visions of the colony, and the reconfiguration of colonial space through new connections between far flung places and the compression of time. Based on the background above, this paper will explain how did KNILM flight during the Great Depression period and how did KNILM keep flying in that period.

## 2. Literature Review

Research on the early history of civil aviation in the Netherlands East Indies can be said to be a novelty. The historiography of civil aviation in Indonesia has been widely written by writers from Indonesia. However, civil aviation in historical perspective is still very limited, especially regarding the history of civil aviation written by the Indonesians themselves. So far as the history of civil aviation, more specifically the history of the



KNILM, still relied on the writings of foreign historians including references that the author used to complete this paper. This paper will discuss KNILM during the Great Depression by questioning whether the Great Depression that took place for more less 4 years influenced on KNILM air services or not. A researcher who had written related to the problem was Russel.E.Hall (Hall, 1937) in his article entitled "Dutch Airways in the Far East Show Rapid Growth" stated that the Great Depression did not affect the operation of KNILM air services in the Netherlands East Indies. Hall provided the assumption by analyzing the expansion of air routes, the number of fleets owned, and the extent of the flights that the KNILM had taken during the Great Depression. According to Hall, KNILM had expanded air services in several major cities in the Netherlands East Indies. The expansion was started from the beginning of its operation that is, with a length of 6.104,546 kilometers to 22.777,004 kiloineters in November 1936. Furthermore, until 1934, the far reaching flight of KNILM was 956,466 kilometers. Moreover, the number of fleets owned by KNILM also increased from 4 to 11, consisting of 4 Fokker VII-B (syddeley-Lynx motor) aircraft, 2 Fokker VII-B (Titan motor), 2 Fokker F XII, and 3 Douglas DC-2. Through the earlier study, this paper amis both, to investigate and answer whether the Great Depression did not affect the KNILM performance in giving air services in the Netherlands East Indies.

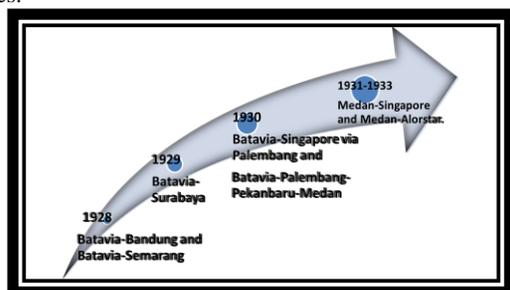


Fig 2. Several Air Routes of KNILM from 1928-1933

The paper written by a historical method which consists of four stages namely, heuristics, critics, interpretation, and historiography. *Heuristics* is the first step of research by collecting of sources. Historical sources are classified into three types namely, primary, secondary, and tertiary sources. Primary sources are the main source of this research because it provide new facts and ideas for writers and at the same time can record events in the colonial period that became the object of the study of writing. This paper relied heavily two magazines, KNILM Nieuws and Luchtvaart which became the official organs of KNILM to promote and give some information about the growth of the airline. Those collection of sources can be found in the National Library of Indonesia in Jakarta as well Universiteits Bibliotheek Leiden in the Netherlands. Author also used several newspapers, maps, and photos as supplementary sources.

*Criticism* is the selection and sorting of sources that can be used as a reference and take off sources that can not be used as a reference. There are two kinds of critics that commonly used in a historical method. First, intern critic is actually a textual critic such a grammatical procedures used in analyzing and reconstructing texts when the order or spelling present in the text is considered incomplete or oddly meaningful. Second, extern critic is used to examine a source through information obtained from other sources both in writing and using materials on research. In this extern critic, the author makes direct observations on the type of paper and language that be used. While, *Interpretation* is used to analyze sources that already obtained. From this stage, we can conclude whether the event is

literally happened or not based on sources. The last but not least is *historiography* or writing process

### 3. The Establishment of New Infrastructure for Civil Aviation

The advent of civil aviation in the Netherlands East Indies during the period 1928-1934 raised the need for facilities that could support its development. The first requirement was the construction of airports. The decision to establish airport was determined by their value for commercial traffic or distance to primary business centers where they could be connected with other means of transportation. Newly built airfields could be divided into two kinds, namely, main fields and intermediary fields. Main landing fields or aerodromes were suited for all air traffic including international services. They were supported with extensive infrastructure support including hangars, workshops, stores, petrol and oil supply depots. Intermediary landing fields offered little more than the minimum conditions for safe landing and takeoff. In 1928-1934, there were 3 main aerodromes in Java, namely, Tjililitan in Batavia, Andir in Bandung, Darmo in Surabaya, and one intermediary field namely, Simongan in Semarang. Just as in Java, there were also three aerodromes in Sumatra namely, Palembang, Pekanbaru, and Medan. In Palembang also had an intermediary landing field located in Talang Batoetoe. Soon after the opening of air service to Medan, the head of the Aviation Office requested an expansion of the Medan's airport by increasing the length of the landing strip. On 16<sup>th</sup> September 1934, a new aerodrome was officially opened in Brastagi, Medan.



Fig 3. A three-engine Fokker FVII arrived in Palembang  
Source : Koninklijk Instituut voor Taal-, Land- en Volkenkunde (KITLV), October 4, 1930.

The next obvious need was the availability of aircraft. The first aircraft used by KNILM to operate air services was a three-engine Fokker aircraft. In these early years, the airline owned five aircraft. The main planes used by the airline were the F-VII and F-XII series, passenger plane, which could carry up to 3350 kg of cargo. F VII were configured as 6-8 seat passenger planes for most flights, but on long trip only 4 -5 passengers were carried and 5 easy chairs were taken along. All the planes operated in the Netherlands East Indies were purchased from the well-known aircraft manufacturer A.H.G Fokker in the Netherlands. Arrangements were made through the Royal Dutch Airlines KLM for the purchase of aircraft equipment and parts. KLM was also responsible for the care of technical details.

With the advent of regular air service in the colony came the need for the increased use of highly specialized gasoline. Bataafsche Petroleum Maatschappij (BPM) or Batavia Oil Company, was a subsidiary of Royal Dutch Shell and was the primary supplier of gasoline for the airline. BPM had a direct interest in this business as it was one of the companies that played a significant role in the

establishment of KNILM. BPM built refineries, laboratories, and test stations and worked together with skilled technicians and chemists to produce high quality aviation fuel for the airline's needs. After receiving an order from KNILM, BPM would distribute the oil via the Shell Aircraft Service Station to the airfield. The gasoline was discharged to the aircraft using the Sussex tank car that has been provided at the filling stations at the airports. Certain airports in Netherlands East Indies such as Tjililitan in Batavia, Darmo in Surabaya, and Talang Batoetoe in Palembang had modern tanker facilities that could pump around 300 litres of gasoline into the aircraft's tank.

Civil aviation infrastructure also needed skilled personnel, notably, expert pilots. KNILM trained pilots locally and also provided training for pilots to make flights at night, in order to add to their confidence. Night-flying was practiced on the Morokrengan Air Base once a week, in order to enable pilots to feel just as comfortable in the air by night as by day. Other skilled personnel included aircraft engineers and riggers who were in charge of engine maintenance. These skilled persons were brought by KLM directly from Europe to the Netherlands East Indies. They were also asked to provide training to local mechanics on how to repair a damaged machine.

#### 4. European Domination in the KNILM's Air Services

Initially, the policy of establishment a civil aviation sector in the Netherlands East Indies led to a some disagreement. Some parties did not approve of the idea for the adoption of air transport system in the Netherlands East Indies. According to them, the Netherlands East Indies did not need a fast mode of transportation. Railway transportation was more than able to overcome the distance barriers that separated one city from another. However, there were many who supported the implementation of air transportation system in the Netherlands East Indies.

The primary users of KNILM air services were mostly Europeans due to reasons of cost. In that sense, it could be said that the Europeans who dominated the air services by KNILM made air transport a new instrument of colonial government. KNILM was not only popular as a mode of transportation for government officials in the Netherlands East Indies, but was also used by high-ranking officials from other countries. Among the dignitaries who have used KNILM air services were the King and Queen of Siam, the Prince and Queen from Belgium (King Leopold and Queen Astrid), Governor Generals of French Indo-China, the Philipines, Strait Settlement, Australia, etc. As is not surprising for a colonial service, KNILM collected data on the ethnic background of its passengers.

Of the passengers that used air service by KNILM, 90-95 percent of those were Europeans, 5-7 percent people of Chinese extraction. Only around 1 percent of passengers were non-Chinese Indonesians. The popularity of air transportation as a luxurious and sophisticated transportation experience made the sensation of flying with KNILM highly desirable. At the 10th anniversary of KNILM, the airline held a series of concert music and attractions with door prizes including a round trip Batavia-Bandung flight for two lucky people. In the 1930s, the price of a plane ticket for air service from Batavia to Bandung around f 9-15.25. By contrast, the wages of native laborers in 1933 around f 0.75-1.5 per day. As a result, the indigenous population could only see the sophistication of the new mode of transportation from below when the KNILM plane crossed the air.



Fig 4. European passengers of KNILM air service  
Source : *Touring the Tropics at Top Speed*, 1937.

The image portrays vividly the position of the indigenous populace – only able to see the wonders of modern technology from the outside while quite unable to get in and experience flight for themselves due to the high cost. In a typical example of subaltern resistance they coined an acronym KNILM short for "Kalau Naik Ini Lemas Mati" or "Enter into one of these, and you will soon be dead" which could be seen as a satirical and telling comment on modern air transport expressing both fear and wonder. This new mode of transportation for the colonial nation is typically ambivalent - a symbol of colonial power and racial exclusion as well as a means to show the power and authority of the Europeans especially the Dutch in the Netherlands East Indies.

#### 5. Civil Aviation in the Netherlands East Indies during Great Depression

The Great Depression that took place since 1929 has brought great setbacks in various economic sectors of the world such as plantations, commerce, industry and, of course, the civil aviation sector. Although during the Great Depression, there was a slowdown in the aviation business sector, but precisely at this time there is a rapid development in the use of aircraft technology, especially in the United States and the Netherlands. All parts of aircraft no longer used wood that was deemed unfit for airlines. The material of aircraft then was made of by strong metal with modern design. Modernization was shown from the design on the wing plane that used a single wing or well known as monoplane.

The most of KNILM's fleet were imported from Fokker's factory, an aircraft industry based in Amsterdam. The owner of that industry named Anthony Fokker, a well known person who had cooperated both with KLM and KNILM in providing aircrafts. In 1930s, Fokker designed a new model of aircraft that is, F XII, a big aircraft. KNILM was very interested in purchasing large aircraft F XII because of the speed and size of the aircraft. By qualifying three machine Pratt en Whitney, each with a capacity of 425 Horse Power (HP), with a top speed of 212 kilometers per hour and a passenger number of 14 people, the KNILM decided to order two FXII aircraft in August 1930. The aircraft is operated for regular service of Batavia-Medan flight route.

The Great Depression that began at the end of 1929 was a major setback for all sectors of economy such as business, trade, and industry, and of course the civil aviation sector. Australian airlines such as Queensland New Navigation Ltd closed Brisbane-Grafton line on 28<sup>th</sup> November 1930 and also the Brisbane-Townsville line on 27<sup>th</sup> January 1931. The Southern Cloud service between Sydney and Melbourne also suffered enormous losses which eventually forced the company to close down on June 26, 1931. However, different conditions applied in the Netherlands East Indies where air services still continued

during the Great Depression. Indeed, not only continued, KNILM opened several new air services among others, Batavia-Singapore via Palembang, Batavia-Medan, Medan-Singapore, and Medan-Alorstar.

**Table 1** : Expansion of Air Routes in the Great Depression Period

The great depression period		
Date	Domestic	International
4 Maret 1930		Batavia-Singapura via Palembang
27 September 1930	Batavia-Palembang-Pekanbaru-Medan	
5 Agustus 1931		Medan-Singapura
4 Mei 1933		Medan-Alorstar

Source : "Jaartallen," *KNILM Nieuws*, 1 Oktober 1938.

On 1<sup>st</sup> November, 1928, KNILM formally opened daily air services between the two most important colonial centers of Batavia and Bandung and between Batavia and Semarang. Within six months since its opening, the number of flights increased to twice a day. One year after the opening of the first routes, KNILM started a twice weekly flight between Batavia and Palembang and a daily flight between Batavia and Surabaya. An indication of the change implied by the arrival of air service can be measured by the saving of time. The flight from Batavia to Palembang took just 3 and a half hours, compared with other mode of transportations such as boat and train that could take as long as 36 hours. On 1<sup>st</sup> November, 1929, KNILM opened the Batavia-Surabaya route. Delays in opening flights to Surabaya were due to the lack of proper facilities. Morokrengan airport in Surabaya was not developed enough for reliable civil aviation so that it took a year for this condition to be improved.

Batavia-Singapore via Palembang was the first international air route opened by KNILM during the Great Depression. This route received great attention both from KNILM and the Netherlands East Indies Government as well. There are several reasons why the KNILM considered Singapore to be an important country to connect with the Netherlands East Indies. First, Singapore is the gateway of trading world to the East and has become a major air junction also has been crossed by various international airlines from England, France, Japan and Australia. In addition to the Netherlands East Indies has long established a very close relationship with Singapore. In Singapore there have been many large banks and large Dutch-owned corporations. So they often made trips back and forth Batavia-Singapore. Besides, there were so many Englishman who take vacations to the Netherlands East Indies every year just to see the beauty of nature and feel the coolness of mountain panorama in Java and Sumatra,

In contrast to domestic routes, preparations for the opening of this first international air route took much time. This was in accordance with the rules set forth in the 1929 protocol referring to the Paris Convention of 1919 which states that each country may determine the conditions for granting foreign aircraft permission through its regular air travel space. Referring to the protocol, the KNILM might obtain prior permission from the British authorities to use the military airport in Seletar for the benefit of civil aviation. Based on the principle of the British military authorities declared that the military airport was not opened for civil air traffic, but KNILM had to thank to the assistance of the Netherlands East Indies consul in Singapore, the permission for the use of airport in Seletar was given by Sir Cecil Clementi as Governor of Straits Settlement to KNILM. The second condition is the availability of wireless services between aircraft and ground-stations. On this issue, after several trials of wireless services were conducted between Batavia and Palembang, KNILM stated that the field organization had

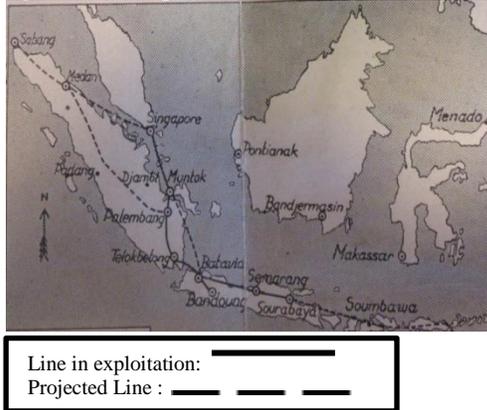
successfully completed its task in the effort to provide wireless services. Therefore, on February 10<sup>th</sup>, 1930, a successful flight test between Batavia and Singapore was carried out where the KNILM flight departed from Cililitan airport at 6.30 a.m.

After KNILM had completed all the requirements then, the first international air route between Batavia and Singapore was officially opened on March 4, 1930. In the inauguration of the route, the Director of KNILM, H.Nieuwenhuis and Governor Sir Cecil Clementi gave speeches and greetings also hopes for the Batavia-Singapore connection. Nieuwenhuis stated that the Batavia-Singapore air route had a huge importance especially, in promoting trade and business between both countries. Therefore, Nieuwenhuis strongly expected active supports from the Straits Government towards this rapid connection. Governor Cecil also replied Nieuwenhuis's speech and promised to support the progress of Batavia-Singapore air routes. The inauguration was witnessed by almost all Dutch residents at Seletar airport. Of course there was a pride of both Dutch residents lived in Singapore and the European community in the Netherlands East Indies because the Batavia-Singapore air route was not only the first international air route to be inaugurated by KNILM but, had become the first international air route in Southeast Asia. This route is not only important for the Netherlands, but it is also important for the British and Australia. Those countries had cooperated with KNILM to create good communication for business interests by using airmail service of KNILM.

Initially the Batavia-Singapore air route was operated without passing through Palembang, but on the calculation that the Batavia-Palembang-Singapore air route was more profitable therefore, it was decided that the Batavia-Singapore air route passed Palembang. They considered that route became a lucrative route when passed Palembang because KNILM could transport passengers from Palembang to Singapore. In Palembang, there are two big oil companies and has become an important intermediary for KNILM. The aircraft used in the operation of this route is Fokker VII B 3-motor which is scheduled to depart from Cililitan airport at 7:15 am. Then the question is why the amphibious plane is not operated considering the path is mostly surrounded by oceans. KNILM has a reason that the ground planes are faster and more profitable than seaplanes. Although the distance between Batavia-Singapore is only 70 kilometers east of Palembang. But it does not mean that the sea path becomes the shortest but the longest path.

After Palembang was connected to the air network, the next city that got a great concern from KNILM is Medan. Medan had been known as a tobacco and rubber producing plantation city. The existence of the Deli Maatschappij plantation company had attracted foreign investors in many countries such as Britain, China, Germany, Switzerland, France, Belgium, etc. They came and built a plantation business in Medan. Many rubber estates were developed by several foreign companies such as Goodyear, Goodrich, and Hollandsch-Amerikaansche Plantagen Maatschappij of America, Harrison Crossfields of England, and Societe Financiere des Caoutchoucs and French-Belgian companies, etc. Seeing the huge commercial and business potential of Medan, KNILM finally decided to open the Batavia-Palembang-Pekanbaru-Medan air route on September 27<sup>th</sup>, 1930, just six months after the first Batavia-Singapore international air route was opened. The Batavia-Medan air route is 1600 kilometers away. Before the mode of the aircraft was operated, to reach Medan from Batavia, it could be reached by ship. Several Dutch shipping companies had been operated on Batavia-Medan line for instance, *Stoomvaart Maatschappij* and *Rotterdam Lloyd*. KPM was also operated on Batavia-Medan line. The long trip by ship that is, 76 hours or more than 3 days. Whereas, when KNILM opened air service between Batavia-Medan, the trip could be

shortened only 10 hours or had saved around 66 hours. KNILM had been a proper alternative for business travelers, Batavia-Medan air service was only opened once a week because the mode of ship also had a regular air service from Batavia-Medan.



**Fig 5.** The map of KNILM's air routes  
 Source : Map Java and Sumatra from the air : Medan, Singapore, Palembang, Batavia, Bandoung, Semarang, Sourabaya in 1930 by KNILM, from special collections of Leiden University.

During 1931-1932, the KNILM did not expand at all and that was clearly influenced by the Great Depression and the subsidy reduction plan for 1934-1936 as well. The opening of the new air route was restarted on March 4<sup>th</sup>, 1933, namely the Medan-Alorsetar (Kedah) air route, but this air route lasted only 8 months because in the beginning of November, the air service was closed due to policy changes imposed by KLM. Referring to the initial plan that KLM operated air service from Alor Star-Medan-Singapore-Palembang-Batavia-Bandung. But then, KNILM objected because it meant that between Singapore, Palembang, and Medan would be competed. Therefore, KLM decided not to use the Medan line, but directly from Alorstar to Singapore. The question of the closure of the Medan-Alorstar-Singapore air route caused the question of competition between KLM and KNILM on Sumatra-Singapore-Java air routes. But that view was not justified by Enthoven, as Director of KNILM centered in Amsterdam. In an interview with a newspaper in Amsterdam where Enthoven stated that the characters between the two services are very different. KNILM is entirely connected for the insular and interinsular in the Netherlands East Indies traffic and also for neighboring countries so that expansion on the Java-Australia and Java-Indo China is also entirely the task of the KNILM. The claim that KLM will offer to run air services from KNILM without subsidies, of course has no true basis. The acquisition of Douglas aircraft as well as the planned purchase of the Sikorsky aircraft proved that KNILM was ready to develop civil aviation in the Netherlands East Indies. Thus, the cooperation between KNILM and KLM was a good collaboration and people should not worry about how to keep the interests of the Netherlands East Indies more specifically. To see how did KNILM conditions in the Greta Depression period, the author used data describing the amount of cargo of passengers, goods, airmail, flight hours, and distance flights.

**Table 2 :** Statistics of KNILM from 1928-1934

Year	Passenger	Goods (KG)	Airmail(KG)	Flight Hours	Distance(KM)
1928(2month)	2.107	3.588	208	377	60.320
1929	14.457	63.793	2.232	3063	489.000

1930	18.248	119.927	9.372	5.011	802.000
1931	17.212	92.160	18.818	5.677	919.794
1932	18.666	65.986	19.470	5.284	858.358
1933	13.078	69.068	24.279	5.339	863.698
1934	17.630	74.708	27.564	5.852	956.466

Source : "Statistische Gegevens," *KNILM Nieuws*, 1 Oktober 1938

Based on the data above, the number of passengers, goods, and airmail has increased very drastically in 1930, the increase is also followed by increased flight hours and distance flight. The Batavia-Bandung route became the largest contributor in terms of KNILM revenues in 1930 ie, for f142,996.5 for passengers, f13.608.17 for goods, and f559.06 for airmail with 80% of travel percentage. The large revenue is due to the passengers, goods, and airmails for the Batavia-Bandung route v.v also become the largest among the other air routes. One year later the number of passengers and freight decreased, except the number of airmail remained high. The drastic increase occurred in 1933, where the number of passengers decreased from 18,666 to 13,078, but in the same year the cargo of goods and mail increased. The amount of passengers, goods, and mails jumped up again in 1934.

The interesting thing about the table above is that the amount of airmails always increased from the beginning of KNILM air service operation until the end of the Great Depression. The airmail loads brought in 1928 was 208 KG, the number rose to 2,232 KG. In 1930, the number jumped more than 4 times from the previous year ie, 9.3.72 KG. Then it became 18,818 KG in 1931 and increased again in 1932 to 19,470 KG. In 1933, the number of airmail loads reached 24,279 KG, reaching its peak in 1934 to 27,564 KG. The data indicates that the Great Depression period did not affect people to stop corresponding. It can be proved from the increasing number of airmail loads from year to year. In addition, when all KNILM's revenue went decreased, only the revenue of airmail service grew up during the Great Depression period.

Of course this become a remarkable achievement of how airline can continue to operate in the midst of a difficult global crisis. KNILM did not only air services during the Great Depression, but also did a series of expansions in both the expansion of civil aviation facilities and infrastructure, as well as the expansion of other air routes. The most important expansion in the Great Depression period are Batavia-Singapore via Palembang and Batavia-Pekanbaru Palembang-Medan in 1930.

Then the question is why the KNILM continues to expand, while other air carriers in many countries must bear huge losses and even close some air routes in the onslaught of the global crisis. This is due to the existence of the annual subsidy provided by the Netherlands East Indies Government so that it can bear the cost of operating KNILM air services. On October 24<sup>th</sup>, 1928, there was a signing contract between the Netherlands East Indies Government and KNILM regarding the subsidy within 5 years ie, from 1928-1933. A subsidy of f1,000,000 was borne by the Government of the Netherlands East Indies to be paid to KNILM. Subsidies were given to airmail services throughout the archipelago in the Netherlands East Indies.

Based on the analyses of these sources, it is incorrect to say that the Great Depression did not has any effect on KNILM as the argument of some previous writings. The Great Depression that happened for about 5 years, had given an insignificant impact on the sustainability of the company. Although in the case, the

KNILM continued to operate a regular service, but in 1931-1932 KNILM did not expand air routes at all. In addition, the cargo of goods, flight hours, and distance lights traveled also declined in the same year. In 1933, KNILM expanded air routes on Medan-Singapore and Medan-Alorstar, but both routes were closed several months after the operation due to KLM's interest. After the Great Depression period was end, and the world economy had improved again around 1934, KNILM re-expanded air routes in other trading cities in the Netherlands East Indies.

## 6. Conclusion

The initial operation of civil aviation in the Netherlands East Indies, from 1928 to 1934, began with 15 flight routes connecting Java-Sumatra-Singapore. Civil aviation in the Netherlands East Indies became increasingly popular and grew rapidly and continued despite the period of Great Depression. The numbers of passengers, goods and mail increased dramatically from 1928 to 1934. The opening of air services to major cities such as Batavia, Bandung, Semarang, Surabaya as well as Palembang, Pekanbaru, and Medan were strongly influenced by government interests particularly, both in economic and political interests. Trade and business were important issues affecting the selection of certain cities over others. Hence, the establishment of air routes that connected Java-Sumatra-Singapore led to the formation of new geographies in the Netherlands East Indies. Excluded from these new developments were regions such as West and Middle Kalimantan, Middle and South Sulawesi, Halmahera, Maluku, Ambon, Papua, and a lot of small islands in the East.

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