

Report on Participation in Overseas Study Program in Germany

Sunhee Suk
Graduate School of: Economics
Kyoto University
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1. Preparations

Two preparation meetings (Oct. 16 and Nov. 14) and one time gathering (Nov.26) for a rehearsal of the presentation for the Hei-kyo workshop were held before the trip. I could not attend the last one for the presentation rehearsal due to a health problem.

In the preparation meeting, we have decided to allocate the tasks about who is responsible for the movement on certain day or organization duties for a meeting for a smooth movement and faithful meetings during the trip. My task was to prepare two questionnaires for the interviews with the SMA and Hessen government. I collected questions from the members (two persons contributed) and listed up the questions. As promised with the Hessen government to send it by Nov. 18, two questionnaires after Prof. Souk's comments were finalized by 18 and shared with the Hessen government.

2. Purpose and Schedule in Germany

The main purpose of this trip was to have intercultural knowledge exchanges between students in Kyoto University and two host Universities, Heidelberg University and Goethe University, in Germany. As well as certain other activities using spare time during the trip, several visits to related-institutes for each member's research were planned to have interviews with experts and professionals there as scheduled below.

Date/time	Place
Dec. 2 (Tue)	10:00-12:00 SMA Solar Technology AG
Dec. 3 (Wed)	10:00-12:00 Ministry of Economics, Energy, Transport and Regional Development, State of Hessen
	16:30-17:30 Deutsche Bank AG
Dec. 4 (Thu)	11:50-13:30 Faculty of Economics and Business Administration, Goethe University
	14:00-16:00 Participation in the Lecture: MEAS (Modern East Asian Studies) by Prof. Cornelia Storz
Dec. 5 (Fri)	11:00-16:00 Hei-Kyo (Heidelberg-Kyodai) Workshop: Global Economy in Europe and Asia: Past and Present
Dec. 6 (Sat)	14:30-15:30 St. Hedwig Pflegeheimat

3. Results

During the workshop, all the interview meetings and onsite visits were smoothly implemented regarding the schedule. The outputs are summarized as follows.

3.1 SMA Solar Technology AG

Participants: Prof. Mike Meinhardt, director, Innovation & Knowledge Management

Peter Henniges, Besucherservice

Kyodai-group (Prof. Tokumaru, Prof. Souksavanh, Sunhee, Fang, Shengfei, Yoshida, Yamaguchi)

Meeting Memo:

In the beginning of the meeting, Prof. Mike gave us a presentation, in which he introduced the general information of the SMA, a self-electricity system using solar panel and the core technology of inverter SMA developed. According to his presentation, SMA was established by three students in electricity engineering of the University of Kassel in 1981. In early time, the business put the focus on the development of the decentralized energy supplement system to apply to islands. During the 1990's, it covered several renewable energy sources such as wind power, PV, hydropower and so forth in their business. The business focused on PV only from 2000s, which was further integrated by providing an energy management system recently. SMA shares 25-30% of the world market. Its export rate is over 70%. The total number of employee in numbers worldwide is around 5,000. The inverter, SMA's core technology converting direct current to alternating current, achieves 99.15% of its efficiency, which is significantly higher than the world average of 95%.

After Prof. Mike's comprehensive introduction, we had some time for discussions. The question list was

prepared by Kyodai-group in advance (attached_1). The questions are including the benefit/profit for the installer of SMA solar system; firm's favorable renewable energy policies and government supports for renewable energy industries in Germany; obstacles and prospect of renewable energy market. Some of the questions were not covered due to the limitation of time. However, most of them were kindly answered. In the end Prof. Mike also shared his insights about the renewable energy industries' future and his desires of how energy market has to become. Furthermore, he gave insights in how the young generation can get interested in our future energy system.

3.2 Ministry of Economics, Energy, Transport and Regional Development of State of Hessen

Participants: Dr. Friedrich.Hanisch, Energy Efficiency

Dr. Andreas.Meissauer, Energy Policy, Renewable Energies, Energy Technologies

Dr. Carola.Carius, and Kyodai-group

Meeting Memo:

Hessen state is a home for more than six million inhabitants. In January 2012, Hessen Environment Minister Lucia Puttrich presented the goal of achieving 100% renewable electricity and heat by 2050, which is a more ambitious one than that of central government, to 80% of 2050. For a better understanding of the Hessen state's renewable energy policies, its implication and application in practical, a meeting was arranged during the trip.



Pic1. Family picture with officials in Hessen government after a meeting with them.

After brief bilateral introductions, the meeting was progressed along the questions one by one which were prepared by Kyodai-group and shared with the Hessen government for their preparation in advance (attached_2). Hessen state's energy policies including government structure, energy policies in past, present and future and issues with other states; electricity system and price; financial supports for industries; public awareness and policy reflection, and obstacles and projections are incorporated in the questionnaire.

During the meeting, Dr. Friedrich gave us general information about the state of Hessen. After him, Dr. Meissauer mainly covered overall questions. Dr. Carius explained related policies for industries. The most impressive thing noted, is after the Fukushima nuclear power plant accident in 2011 a social consensus about nuclear power was agreed in Germany, and it was immediately reflected on their energy policies practically. This policy implementation led to renewable industries' boosting resulting in this country being a leading country on the clean energy transformation in the world. Hessen government is now focusing on the expansion of the decentralized energy supply system based on the renewable energies. Further communications and cooperation between Hessen and Kyodai were kindly promised.

3.3 Deutsche Bank AG

Main points:

During visiting the Deutsche Bank AG, their sustainable strategies on energy efficiency and environment management by enhancing their building system were explained. 55% of their energy saving was achieved by their redesigned elevator system and newly loaded sensors that recognize the radius of person's action from the main gate to his/her desk. Their renovation on energy management could be praised as a successful green innovation for a large building, consuming huge amounts of energy and emitting volume of CO₂ emission. In reducing energy consumption, system improvement is one of the remaining strategies for sectors those who have only limited energy saving potential in Japan and Korea. The Deutsche Bank's achievement would be a good practice.

Without behavior-change-pressure for actors, the well-designed system adopting advanced technologies helps us to save energy in a smart and convenience way. This might be what governments should pursue in committing the energy supply system transformation.

3.4 Goethe University

Lecture Memo:

We were kindly invited to participate in Prof. Cornelia Storz's class, the MEAS (Modern East Asian Studies). Today's topic of the lecture was titled '*institutional change*'. Briefly memo of the lecture, quoting the P. Culpepper's paper in 2005, Prof. Cornelia said an institution will be changed by exogenous origins of change or belief shifts and the role of key actors. Prior to the changes, there was probably an observation and new belief which convinced actors for a change. The real institutional change may come by actors' behavior change. Legal change will trigger these behavior changes. She gave examples of the industries' institutional change in Germany, France and neighbor countries crossing the border. In the end of class, she raised a question to students, '*if you are a policy maker, what would you do?*' Students freely participated in the class. Their answers were mostly about to set a platform for publics to discuss and compromise for the ideal goal/change, which is a bottom-up decision type.

One question which pop-upped in my mind was: 'what determinants and their differences which affect to

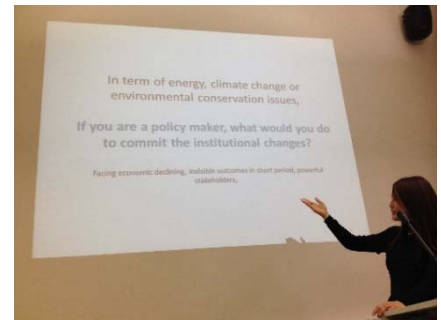
the institutional changes of the countries under the different institutions in place are there? I might be used to follow a majority of ideas or an intuitive conclusion by a key actor under the top-down decision making system in Korea. In terms of the energy policies, Germany and Korea (and Japan too) have undergone obviously the different pathways promoting the institutional change. Under the existing institutional features in Germany and Korea (and Japan), I would like to find the determinant factors influencing in the form of past and current energy policies in both countries, I thought.

3.5 Hei-kyo Workshop on Global Economy in Europe and Asia: Past and Present

Main points:

Workshop was held from 13:00 to 16:00 pm. 12 students from Heidelberg university and Kyoto university made presentations for 25 minutes for each including question time¹. Prof. Harald Fuess coordinated the workshop. With his kind welcome for our group in the beginning, the workshop was started.

During the workshop, students actively attended to and participated in giving questions and discussions on the presentations. All the presentations were informative to understand the student's study topics and their contents. My presentation was regarding on the German and Japan's different pathway of energy policies after the Fukushima accident. There were several questions from the side of the Heidelberg students. These questions from the perspective of Germany were helpful to understand their concerns and ideas on this matter. Dinner time afterward was joyful, especially referring to talking with students from Heidelberg.



Pic2. During the presentation in the workshop (photo by Prof. Souk)

3.6 St. Hedwig Pflegeheimat

Participants: Ms. Kathrin Reidel, and Ms. Andreas Lauer

Prof Souksavanh, Sunhee, Fang, Shengfei, Yoshida, Yamaguchi

Meeting Memo:

This meeting was arranged by Yoshida san to see an example of a nursing home in Germany and how they manage the facility and reserve workforce. As her master's degree, she is focusing on the societal problems such as aging population combined with the diminishing number of children and degeneration society which would affect national productivity in the future.

In the St. Hedwig Pflegeheimat, we received a very warm welcome. Before having an interview, we were guided to walk around to see the facilities. We greeted the habitants and were even allowed to see one of the habitant's room. It was big enough for one person with all equipment necessary and cozy to protect privacy. A nurse from Africa we met, kindly mingled with us for a photo and told about her task. We walked back to a meeting room. Yoshida san gave her questions.

Summarizing the meeting, as a private facility, it is sponsored by Caritas (Caritas: a confederation of Roman Catholic relief, development and social service organizations *from Wikipedia*). At the moment, 104 habitants (maximum capability is 120) are accommodated. Two nurses and three helpers for each floor, four social workers and ten staff employees are engaged in it. The costs for the accommodation are different, depending to the patient's care level. Three care levels divided by the care time; less 90min; 90-180min, and over 180min are placed. No legal restriction of the number of care home in one community is there. As similar with Japan, they are facing the problem of labor shortage. However, it seems not always welcome that the cheaper labor from the neighboring countries, i.e. Poland, is in-flowed in Germany and occupies their room. Sometimes there is a social issue breaking out such as nurses' inappropriate treatment to the patients which may be caused by the stress from their heavy workload. Due to the high accommodation fare, everyone who desired to be accommodated is not always able to enter to a care home for their aging. Usually, a working person by 63-age will be receiving a benefit for the total (or a part, in this case, the patient should cover the difference by him/herself) of the cost by the insurance system. A feature different from Japan is nurses in Germany tend to go to northern Europe for higher wage meanwhile German patients look for care homes in the neighbor countries with are relatively cheap, in order to reduce the costs.

5. Overall

It was a motivative trip. The workshop in Heidelberg University and the lecture in Goethe University, the main purpose of this trip, were informative. Hearing from the related experts in Germany regarding my research interests gave me much insights as well as useful information. I also could extend the view on Germany, I have not known well before through joining together in the meeting other student members organized based on their interest.

With kind contributions from two professors and the student members, we could do a safe and instructive

¹ See the presenters and presentation titles: http://www.asia-europe.uni-heidelberg.de/en/newsevents/events/event-view/cal/event/view-list%7Cpage_id-29/tx_cal_phpicalendar/2014/12/05/workshop_hei_kyo_heidelberg_kyoto_on_global_economy_in_europe_and_asia_past_and_present.html

trip in Germany. After the trip, we sent a greeting e-mail to each institute for giving our gratitude and informing of our safe returning to Japan with photos. As following up, Dr. Hanisch at the Hessen government inquired information of the funds for renewable energies in Japan. Through exchanging the relevant information with each other, further cooperation will be made.

I would like to give my thanks for obtaining this great opportunity and will reflect the outputs gained from the trip to my research progress.