Regional development of intellectual property in countries with transition economics.

14th session:
Companies & host environments – Tendencies, actors & examples of corporate embeddedness

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Context

• Introduction. What Is Intellectual property?
• How It Develops in the Modern World?
• Hypothesis
• Research Methodology and Data
• Results
• Conclusion
What is Intellectual Property?

- **Industrial Property**
  - patents
  - trademarks
  - industrial designs
  - geographical indications

- **Copyright**
  - literary works (such as novels, poems and plays)
  - films, music, artistic works (e.g., drawings, paintings, photographs and sculptures)
  - architectural design
How IP develops in the world
Developing IP by regions

Patents
- Asia
- Europe
- North America
- Latin America and the Caribbean
- Africa
- Oceania

Trademarks
- Asia
- Europe
- North America
- Latin America and the Caribbean
- Africa
- Oceania

Utility Models
- Asia
- Europe
- North America
- Latin America and the Caribbean
- Africa
- Oceania

Industrial Design
- Asia
- Europe
- North America
- Latin America and the Caribbean
- Africa
- Oceania
PCT top tech fields

Digital communication
- USA: 3
- China: 1
- Japan: 1
- Germany: 2
- S. Korea: 1

Electrical machinery, apparatus, energy
- USA: 3
- China: 1
- Japan: 1
- Germany: 2
- S. Korea: 2

Computer technology
- USA: 1
- China: 2
- Japan: 3
- Germany: 3
- S. Korea: 3

Transport
- USA: 3
- China: 1
- Japan: 1
- Germany: 1
- S. Korea: 1

Medical technology
- USA: 2
- China: 2
- Japan: 2
- Germany: 2
- S. Korea: 2

Mechanical elements
- USA: 3
- China: 1
- Japan: 1
- Germany: 1
- S. Korea: 1
PCT top 10 applicants

Applications

- TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
- SONY CORPORATION
- SAMSUNG ELECTRONICS CO., LTD
- BOE TECHNOLOGY GROUP CO., LTD
- LG ELECTRONICS INC.
- QUALCOMM INCORPORATED
- MITSUBISHI ELECTRIC CORPORATION
- INTEL CORPORATION
- ZTE CORPORATION
- HUAWEI TECHNOLOGIES CO., LTD.

China
- HUAWEI TECHNOLOGIES CO., LTD
- ZTE CORPORATION
- BOE TECHNOLOGY GROUP CO., LTD

USA
- INTEL CORPORATION
- QUALCOMM INCORPORATED

Japan
- MITSUBISHI ELECTRIC CORPORATION
- SONY CORPORATION

S. Korea
- LG ELECTRONICS INC.
- SAMSUNG ELECTRONICS CO., LTD

Sweden
- TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)
Research Methodology and Data

Data
Secondary data – WIPO, KazSTAT, Patent office in Kazakhstan

Research methodology
Cluster analysis, namely hierarchical by Statistic program R
Characteristics of Kazakhstan

- Territory is 2,724,902 km²
- Population - 18,311,735
- GDP was worth 159.41 billion US dollars in 2017
- Kazakhstan FDI at 5588.33 USD Million
How patent system develops inside Kazakhstan from 1992-2016
Empirical results

Cluster Dendrogram for Solution HClust.5

Observation Number in Data Set Patent1
Method=ward; Distance=euclidian

Patent applications
Distribution of patents granted for inventions by regions in Kazakhstan in 2017
Cluster Dendrogram for Solution HClust.7

Observation Number in Data Set granted
Method=ward; Distance=euclidian

<table>
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<th>Region</th>
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<tr>
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Granted Patent
Conclusion

Early studies showed a positive result between GDP and patent activity, but not for short-term period. Moreover, development and strength legal side of IP in countries with transition economics give positive results for regions and innovative activities in whole. Today we have tested for the potential formation of clusters within the framework of regional development and wider dissemination of IP as one of the factors affecting innovation. According cluster analysis we found more similar clusters in both situations with patent application and granted patents. Further development of the topic of intellectual property in the regions will be obtained in the chapters of my dissertation.
THANK YOU