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Research on territorial structures of Taiwanese TNCs' subsidiaries in electronic industry

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Abstract
The objective of this paper is to investigate the factors influencing on territorial structures of Taiwanese transnational corporations (TNCs). The study used combined data of the largest Taiwanese TNCs from their annual reports alongside with Taiwan Statistical Databook. More than 800 subsidiaries were investigated and sorted by 4 major types: manufacturing, R&D, marketing and investing. Combining logarithmic gravity model with CAGE (cultural, administrative, geographic and economic) distance framework an empirical analysis was conducted. To reveal the territorial structure of Taiwanese subsidiaries the number of subsidiaries in the host country was chosen as a dependent variable. GDP of the host country and Taiwan alongside with the distance between them represented a gravity equation in the model. Macroregion dummy variables, language preference, difference in political stability were chosen as a representation of CAGE distance. GDP per capita and GDP annual growth rate were used as control variables. 7 cases for 4 types of subsidiaries and for 2 manufacturing types of TNCs in electronic industry and for total number of subsidiaries were analyzed. The research has shown the importance on dividing subsidiaries into their specialization types and defining macroregions where TNCs' subsidiaries operate. These typologies help to understand the nature of territorial structure of TNCs' abroad activity and reveal the differences among types of subsidiaries and manufacturing types of TNCs. However, I haven't found high significance for distance impact for Taiwanese TNCs. Cultural similarity impacts not only FDI inflows, but also to the number of subsidiaries in the host country.

Keywords: TNC, subsidiaries, gravity model, CAGE Distance, Taiwan

1. Introduction

Taiwan is located in the heart of Asia Pacific. Currently it is the 22nd largest economy (5th in Asia Pacific) and 13th in the volume of foreign trade turnover of the country. In 2017, GDP in PPP amounted to 1099 billion. The per capita GDP value at PPP is $49827 [25]. The high rankings of competitiveness and favorable investment climate only urge the Republic of China to maintain and exceed the results achieved. Due to its strategic location along the world's trade routes, Taiwan is a key transport and logistics hub for the Asia Pacific region. Some multinational Asian companies have their head offices in Taiwan.

In the modern world there are not so many big territories that are unrecognized or partially recognized by the world community. No other country in a similar diplomatic situation could not only survive for such a long time, but also achieve such great successes in economic development. Therefore, of particular interest is the study of the development of the Taiwanese economy itself and the inclusion of this area in the world economy.

TNCs of Taiwan, which appeared not so long ago, occupied high positions in many branches of the electronic and petrochemical industries [1]. Their very rapid growth, general recognition and huge shares in the global market became the main reason for writing this paper.

Why it's so important to study TNCs precisely in Taiwan and why we need to have a closer look at this region? There are multiple reasons for it.

- Favorable investment climate and High competitiveness ratings (according to the global competitiveness rating - 15th place in the world) [1];
- Strategic location along world trade routes and close economic ties with Europe through the Netherlands, North America through the USA, as well as with Japan [5];
- A gradual decrease in government control of investment and foreign trade;
- Exports, mainly represented by highly promising industries: electronics and petrochemicals [25];
- An uncertain diplomatic and politic state of the territory maintaining status quo.

All these reasons make Taiwan a unique territory with a great potential for studying. TNCs of Taiwan as the drivers for economic growth of Taiwan should be one of the most important objects of study.

2. Theoretical Model

2.1 Gravity equation

The review of previous empirical researches shows that gravity model is one of the most popular and successful determinants for FDI and TNCs' abroad activity. Gravity model is based on the physical theory of gravity firstly described in Newton's law of gravity. In the second half of 20th century after realizing that this model can describe not only physical laws, Walter Isard introduced the gravity model of trade [18], as follows:

$$F_{ij} = G * \frac{M_i * M_j}{D_{ij}} \quad (1)$$

This general gravity model tells that trade flow (F) has a relation with economic dimensions of the countries that are being measured (M) and distance between the countries (D). G represents a constant in the equation. Although the first implementations of this model were for trade indicators

(import, export, trade turnover) [6, 16], recently it became a helpful analytical tool in explaining FDI [11, 12, 32]. It was found out the geographical proximity increases the FDI flow and geographical distance play an important part in TNCs' abroad activity. The most common gravity-related factor used in TNCs' abroad activity is GDP. The traditional approach suggests using indicators with natural logarithms (ln) in both sides of the econometric equation. We can write down the gravity model of FDI as follows:

$$\ln(FDI_{ij}) = \beta_0 + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) - \beta_3 \ln(D_{ij}) + \varepsilon_{ij} \quad (2)$$

This equation states that FDI flow (FDI) is directly proportional to GDP of both host and home countries (GDP) and an inversely proportional to the distance between these countries (D). The right part of this equation can be called an economic distance between countries expressed by the size of their economies smoothed by the geographical distance.

As our study deals with number of subsidiaries as a determinant of TNCs' activity to reveal the territorial structure of TNCs' we believe that subsidiaries' establishment depends on the same very factors and has a main root in gravity model. The number of FDI projects, entry mode (dummy) variables and the number of subsidiaries are commonly used as a dependent variable in various FDI researches [3, 9, 10]. The gravity-based part of our empirical model can be written as follows:

$$\ln(NS_j) = \beta_0 + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) + \beta_3 \ln(D_{ij}) + \varepsilon_{ij} \quad (3)$$

Where NS is a number of subsidiaries in country j, GDP is the size of for home (i) and host (j) countries and D is a geographical distance between countries expressed in km.

2.2 CAGE Distance Framework

In order to find more variables explaining the territorial structure of TNCs and location spread of their subsidiaries we rely on CAGE Distance Framework introduced by a professor at the University of Navarra in Spain Pankaj Ghemawat [13]. This framework identifies Cultural, Administrative, Geographic and Economic (CAGE) differences and distances between countries that companies should take into consideration when defining international affairs. Although this framework was firstly suggested for managers as a decision maker assistant, in the later study it was stated that it also can be used to understand patterns of trade, information, capital and people migration [15]. Moreover, the framework suggests using gravity model as a quantitative variable for defining distances between economies. The table 1 shows the main indicators of CAGE Distance Framework.

Table 1: CAGE Distance Framework [13]

	Cultural Distance	Administrative Distance	Geographic Distance	Economic distance
Country Pairs (Bilateral)	▪ Different languages ▪ Different ethnicities; lack of connective ethnic or social networks ▪ Different religions ▪ Lack of trust ▪ Different values, norms, and dispositions	▪ Lack of colonial ties ▪ Lack of shared regional trading bloc ▪ Lack of common currency ▪ Political hostility	▪ Physical distance ▪ Lack of land border ▪ Differences in time zones ▪ Differences in climates / disease environments	▪ Rich/poor differences ▪ Other differences in cost or quality of natural resources, financial resources, human resources, infrastructure, information or knowledge
Countries (Unilateral / Multilateral)	▪ Insularity ▪ Traditionalism	▪ Nonmarket/closed economy (home bias vs. foreign bias) ▪ Lack of membership in international organizations ▪ Weak institutions, corruption	▪ Landlockedness ▪ Lack of internal navigability ▪ Geographic size ▪ Geographic remoteness ▪ Weak transportation or communication links	▪ Economic size ▪ Low per capita income

As we are dealing with country pairs, we are going to use only bilateral part of this table to reveal the factors laying behind the decision of subsidiary establishment. Gravity model will be used as a cumulative determinant for economic and geographic part of our framework.

The cultural distance between countries is defined with the language difference. Besides Pankaj's CAGE distance, languages or ethnic groups were discovered as a good determinant of TNCs' activity in several researches [2, 4, 11]. It was also observed in geostructural analysis that culturally similar economies have a significantly bigger number of subsidiaries, therefore, the willing to open a subsidiary in a culturally similar territory is quite larger. We use a dummy variable that differs countries with the same language or dialect used as official and other countries.

As an additional cumulative variable that represents geographic and cultural distance between countries, we use a dummy variable for 3 macroregions where Taiwanese TNCs' subsidiaries operate. As a lot of countries in our observation can be combined in regions, that represents not only geographical areas but also historical territories with similar ethnics, language and religion. Cultural difference as a determinant is widely used in literature and considered to be one of the main indicators of FDI flow and TNCs' activities [4, 22, 23, 26]. The administrative distance in our framework is represent by difference in political stability index between host and home country. It measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from

approximately -2.5 to 2.5 [21]. The indicator sources are based on Worldwide Governance Indicators. Although, administrative distance has not been examined in the location literature, political stability has a moderate effect on location choice of FDI [8, 20].

3. Conceptual Framework

Thus, a modernized framework for an empirical analysis is presented in the figure 1. It states that the total number of subsidiaries of a TNC in the country are influenced by economic, geographic, cultural and administrative distances. The type of subsidiary and manufacturing type of a TNC are used to check hypothesis and find the differences in variables' impacts on manufacturing, R&D, marketing and service, investing subsidiaries and ODM/OEM (Original Design Manufacturers and Original Equipment Manufacturers) and vendor (selling their own brand) companies in particular. GDP per capita and GDP growth of a host country are used as control variables. The size of economy represented by these indicators has a significant impact on FDI and TNCs' activity [29].

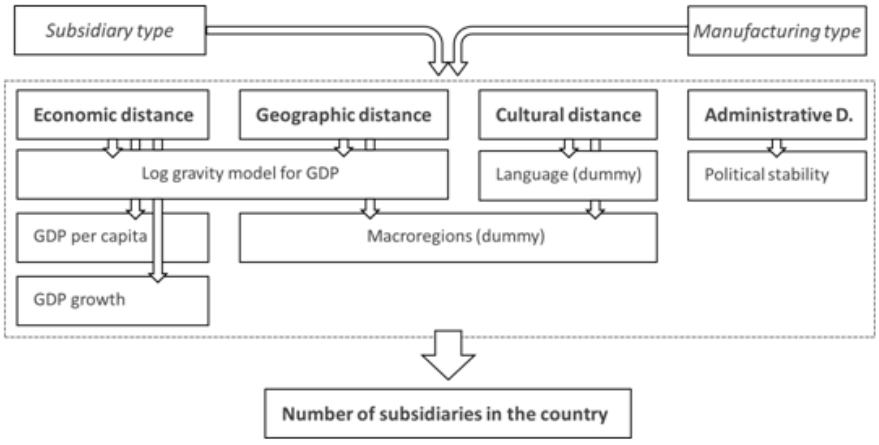

Fig 1: Conceptual framework

The research on factors influencing territorial structure using geographic and structural analysis revealed the importance of selected features and helped to construct several hypotheses.

H1. Subsidiaries' types

Structural analysis of TNCs' subsidiaries in Taiwan and dividing them into several specialization types showed that the specialization of the subsidiary can influence the territorial structure. It also important to check if the subsidiaries with the same specialization of different TNCs show difference in significance of the determinant factors.

H2. Manufacturing types

This hypothesis is only relevant to electronic industry in the research. It is believed that the manufacturing type of industry, whether it is an ODM/OEM or a company with its own brand production (vendors), can influence on territorial spread of TNC's subsidiaries, whether it is widespread or concentrated.

H3. Macroregions

Through historical analysis and geographic specialties of Taiwan's economy and TNC's development it's necessary to check, whether the factors of the local region (distance, local region dummy variable) play an important part in territorial structure of TNCs' subsidiaries spread.

4. Empirical Model

4.1 Model Formulation

According to the conceptual framework and separate theoretical models the following final model was set:

$$lnNS_{ijt} = \alpha 0 + \beta_1 lnGDP_{it} + \beta_2 lnGDP_{jt} + \beta_3 lnD_{ij} + \beta_4 lnGDPP_{jt} + \beta_5 lnGDPG_{jt} + \beta_6 Lg_j + \beta_7 LR_j + \beta_8 WR_j + \beta_9 OR_j + \beta_{10} PSD_{ij} + \mu_{ij} + \varepsilon_{ijt} \quad (4)$$

Where ln before the variable stands for natural logarithm, GDP_{it} is the size of the economy measured in GDP in Taiwan, GDP_{jt} is GDP in the host country, D_{ij} is the bilateral distance between countries, $GDPP_{jt}$ is GDP per capita in the host country, $GDPG_{jt}$ is GDP annual growth in the host country, Lg_j is a dummy variable for common language, LR_j, WR_j, OR_j are dummy variables for macroregion affiliation, PSD_{ij} is a difference in political stability index.

4.2 Variables Selection and Data Source

The research uses the annual time series data of 45 countries with subsidiaries of the largest Taiwanese TNCs from 2006 to 2017. We analysed 894 subsidiaries of the top 10 largest TNCs in Taiwan. Subsidiaries of TNCs in this case mean any structural unit whose controlling stake and held by the parent company, as well as structural units owned by subsidiaries. At the same time, it does not matter whether this structural subdivision is commercial (a plant, a research start-up, a laboratory, a service point) and non-commercial (a representative office of the company). All the variables used in the empirical research are shown in the table 3.

Table 2: Variables used in empirical analysis

Abbr.	Definition	Source
NS	Number of subsidiaries in the host country	TNCs' annual reports, author's own calculations
GDP	GDP in the host country and Taiwan	World Bank Database
GDPP	GDP per capita in the host country	World Bank Database
GDPG	GDP annual growth rate in the host country	World Bank Database
D	Flying bilateral distance between the host country and Taiwan	GlobeFeed Database
PSD	Difference in Political stability index	The Global Economy Database
Lg	Dummy variable: 1 Taiwan and the host use the same language or dialect of it as official and 0 otherwise	Own estimation
LR	Dummy variable: 1 the host is located in the Local (Asian) Region and 0 otherwise	Own classification
WR	Dummy variable: 1 the host is located in the Western (Western world countries) Region and 0 otherwise	Own classification
OR	Dummy variable: 1 the host is located in Offshore (Offshore financial centres) Region and 0 otherwise	Own classification

The dependent variable is the number of subsidiaries (NS) in the host country. This main variable indicates the result of market-seeking decisions of TNC and reveals the territorial structure of the company. In order to check hypotheses and find the differences among types of subsidiaries we will check 7 cases using as a depended variable the total number of subsidiaries and separately for each type of subsidiary (manufacturing, R&D, marketing and service, investing) and manufacturing type of the company (ODM/OEM manufacturers and vendor corporations). All data was gathered through TNCs' annual reports. Own calculation methods were applied to form an annual time series data.

4.3 Descriptive statistics

Table 3 provides correlation matrix and descriptive statistics on analysed variables. As it can be seen on the table the indicators of standard deviation (S.D.) are rather high for GDP, GDP per capita (GDPP) and distance. As it was mentioned above, for GDP and Distance we will use natural logarithm as it is suggested in gravity model for empirical research. To avoid the potential bias of outliers, we also will use natural logarithm for GDP per capita. The correlation coefficients are rather low for all variables. Only one coefficient between difference in political stability index (PSD) and GDP per capita in the host country. It's obvious that pollical stability leads to the country's wellbeing and wealth increase. Thus, our adjusted variable with Taiwan's PSI values can also show the high coefficient of correlation. Correlation matrix values show very low risk of the potential multicollinearity. To control the potential multicollinearity, a multiple regression analysis was performed to reveal the variance inflation factor (VIF). All the values of this parameter are less than 2, which is quite low to be concerned about multicollinearity in our data.

Table 3: Correlation matrix and descriptive statistics

	Mean	S.D.	VIF	1	2	3	4	5	6
NS, qty	6.630	18.139							
1) GDP(Taiwan), billion $	475.616	60.390	1.035	1					
2) GDP(Host), billion $	1336.539	2731.082	1.032	0.06	1				
3) Distance, km	8260.937	4430.120	1.061	0	0.01	1			
4) GDPP, $	28600.407	24987.595	1.789	0.059	0.116	0.056	1		
5) GDPG, %	2.981	3.072	1.221	0.013	-0.03	-0.232	-0.334	1	
6) PSD, index	-0.513	0.910	1.774	-0.095	-0.026	0.018	0.628	-0.326	1

5. Results and hypotheses-testing

5.1 Subsidiaries' types analysis

The results of panel data regression are provided in the table 4.

Table 4: Result on regression analysis. Subsidiaries' types

Variables	NS(TOT) Model 1	NS(MAN) Model 2	NS(RD) Model 3	NS(MAR) Model 4	NS(INV) Model 5
GDP (Host)	0.522***	0.139***	0.1***	0.479***	0.072***
GDP (Taiwan)	0.961***	0.192	0.224^	0.748***	0.442**
DISTANSE	0.062	0.031	-0.075^	0.169*	-0.138*
GDP GROWTH	-0.007	0.024**	0.015**	0.002	-0.024**
GDP Per capita	-0.49***	-0.332***	-0.178***	-0.38***	-0.043
Language	2.021***	1.442***	0.995***	1.399***	1.194***
Local Region	0.377^	-0.275*	-0.323***	0.535***	-0.242^
West. Region	0.316**	0.249**	0.145**	0.348***	0.043
Offshore	2.672***			2.283***	0.919***
Political stab.	0.468***	0.105**	0.076**	0.37***	0.032
R-squared	0.614	0.439	0.406	0.626	0.362
F-stat	86.587	46.05	40.217	88.514	30.07
N	540	540	540	540	540

^ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In case of total number of subsidiaries (MODEL 1) we observe rather high value of squared R at 0.614 and statistical significance for almost all analyzed variables, indicating a strong explanatory power of the model. However, GDP Growth variable and what is more surprisingly geographical distance didn't show any significance. GDP of the host country, Taiwan's GDP, GDP per capita of the host country, difference in political stability index, Language dummy variable and all Macroregions dummy variables are statistically significant ($p < 0.01$). The results suggest that the variables, related to size of the economy (GDP, GDP per capita) alongside with variables based on CAGE Framework and geostructural analysis are able to provide an explanation for location choice of Taiwanese subsidiaries' establishment and formation of the territorial structure of TNCs. Model 2, 3, 4 and 5 represent the cases using only manufacturing, R&D, marketing and service and investing subsidiaries as a dependent variable. In case of Model 2 and 3 we omitted Offshore region dummy variable as an independent variable, as no manufacturing and R&D subsidiaries' types were observed in this area, therefore, this variable cannot determine the location choice.

GDP of the host country showed high significance for all types of subsidiaries, however, the impact on the dependent variable for manufacturing, R&D and investing subsidiaries is lower than for marketing and service. It can be explained by the fact that marketing and service subsidiaries target the markets and are more dependent on the size of economy of the host country. Taiwan's GDP also showed high significance marketing, investing and total number of subsidiaries.

Geographical distance between the host country and Taiwan didn't show high levels of significance in case of Taiwanese TNCs. However, marketing and service subsidiaries and investing subsidiaries showed moderate level of significance but the impact on dependent variable is rather low. It can be stated that in case of Taiwanese TNCs geographical distance is not a big concern in location choice of their subsidiaries.

GDP annual growth also showed very low impact on dependent variables, although it has rather high levels of significance for manufacturing, R&D and investing subsidiaries.

GDP per capita of the host country has a negative impact on the location choice and is highly significant ($p < 0.001$), except for investing subsidiaries. It can be explained by the fact, that even largest TNCs in Taiwan still face some difficulties to access high-income economies. Another explanation can be found in significantly big number of subsidiaries in Mainland China with relatively low GDP per capita.

Language dummy variable showed one of the most powerful impact on dependent variables and is highly significant in all cases for subsidiaries' types. It can be stated, that common language, especially for Chinese speaking countries and territories, plays an important role in location choice of Taiwanese TNCs.

Macroregion dummy variables also have relatively big impact on location choice. Local region plays an important role for marketing and service subsidiaries. However, local region has a negative impact on R&D subsidiaries, which are rather willing to be established in western region. As for western region, the impact is powerful and significant in case of marketing and service and total number of subsidiaries. The biggest impact on the dependent variables showed the offshore dummy variable. The results of the impact are also highly significant. It can be stated that especially marketing and service, and total number of subsidiaries there is no other explanation in this model why TNCs decide to locate their subsidiaries there except for the fact that the host country is OFC.

Difference is political stability index between Taiwan and the host country is highly significant as well, except for investing subsidiaries. However, it doesn't show a powerful impact for manufacturing and R&D subsidiaries.

As for hypothesis-testing, Hypothesis 1 proposes that interaction of subsidiaries of different types with independent factors is not the same. As it was mentioned above, each variable has its own level of impact on different types of subsidiaries. Manufacturing subsidiaries are highly dependent on common language between Taiwan and the host country and undergo a significant negative impact by GDP per capita, what can be explained by the need for cheap labor. R&D subsidiaries have the most unpredictable locations in case of our research, but still have a big dependence on language preferences and tend to be established rather in western countries than in the local region. Marketing and service subsidiaries showed the best significance and biggest impacts of almost all variables in our model. It can be stated that this model suits best this very type of subsidiaries and such explanatory variables as the size of economy, language preferences, region preference and political stability can explain the location choice for marketing and service subsidiaries. As for investment subsidiaries, the biggest interaction is with language preferences and offshore region variable, the other variables play an insignificant or very low role in their location choice. Thus, Hypothesis 1 is fully supported by our research. The result suggests that location choice of subsidiaries' establishment and territorial structure of TNCs' subsidiaries should include a differentiation for the types of subsidiaries, as each subsidiary type is dependent on quantitative and qualitative factors in a different way.

Hypothesis 3 proposes that macroregions play an important role in location choice of TNCs' subsidiaries. Our 3 implemented microregion dummy variables based on geostructural analysis showed very high significance ($p < 0.001$) for at least one type of subsidiaries. The highest impact on our dependent variables showed offshore region, especially for marketing and investing subsidiaries. West region's interaction is rather big for marketing subsidiaries. Local region showed positive impact on marketing as well as total number of subsidiaries. In case of total number of subsidiaries all macroregions showed significance, the highest value of significance is for offshore region. Moreover, according to Taiwanese TNCs' case, geographical distance variable has relatively low values and insignificant impact. Thus, Hypothesis 3 is supported. The study suggests that microregion dummy variables based on geostructural analysis have a better explanation value than geographical distance. TNCs from Taiwan tends to see more potential in regional aspect that often includes cultural, economic, political and other similarities among countries than in distance to the host country. As Taiwan is an island area with no land borders and no other choice but flying to

make arrangements with other countries and territories, it literally erases the distance between countries.

5.2 Manufacturing types analysis

The results of panel data regression for TNCs by manufacturing types are provided in the table 5.

Table 5: Result on regression analysis. Manufacturing types.

Variables	NS(TOT) Model 1	NS(ODEM) Model 6	NS(VEN) Model 7
GDP (Host)	0.522***	0.424***	0.337***
GDP (Taiwan)	0.961***	0.685**	0.606***
DISTANSE	0.062	-0.099	0.178**
GDP GROWTH	-0.007	-0.009	0.002
GDP Per capita	-0.49***	-0.486***	-0.225***
Language	2.021***	1.904***	1.367***
Local Region	0.377^	-0.188	0.504***
West. Region	0.316**	0.246*	0.319***
Offshore	2.672***	2.122***	1.595***
Political stab.	0.468***	0.322***	0.294***
R-squared	0.614	0.500	0.613
F-stat	86.587	52.967	83.85
N	540	540	540

^ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Turning to the testing of Hypothesis 2, that proposes a difference in the difference and impact of explanatory factors for location choice between two types of TNCs in electronic industry by manufacturing types, the table 5.5 above shows the main values of regression. Model 6 stands for OEM/ODM manufacturers, Model 7 is for vender companies.

As shown, Model 6 and Model 7 have similar interactions in terms of economic quantitative variables, such as GPD of the host country and Taiwan, GDP per capita, difference in political stability index with very high values of significance ($p < 0.001$). However, qualitative dummy variables of macroregions have a bigger and more significant impact on subsidiaries of vendor TNCs, especially for western and local region. Moreover, distance matter in terms of vendor TNCs and it has a significant positive interaction with dependent variable. This suggests that vendor companies have a more extensive territorial structure of its subsidiaries than OEM/ODM TNCs. Thus, Hypothesis 2 is supported.

5.3 Robustness check

Since the largest acceptor of Taiwanese TNCs' subsidiaries is Mainland China and formally Taiwan is a Chinese province with a special status we excluded all subsidiaries located in this area. The results remained almost the same with no large deviations. Significance of the impact of explanatory variables stayed in high and very high values. However, the power of impact for GDP of the host country and Language dummy variable decreased. Thus, subsidiaries located in China fit the picture of the model results.

6. Discussion, recommendations and conclusion

The research has shown the importance of qualitative geostructural analysis, the importance on dividing subsidiaries into their specialization types and defining macroregions where TNCs' subsidiaries operate. These typologies help to understand the nature of territorial structure of TNCs' abroad activity and reveal the differences among types of subsidiaries and manufacturing types of TNCs. CAGE distance approach combined with geostructural qualitative dummy variables can be taken as a successful model for defining territorial structure of TNCs' subsidiaries and proving the location choice decisions.

Many researches revealed a big impact on geographic sensitivity in terms of FDI and TNCs using gravity models [3, 10, 11, 28]. We observed high and very high significance of the GDP factor of the both host country and Taiwan). However, we haven't found such high significance for distance impact for Taiwanese TNCs. On one hand Taiwan is an island area and flying distance is not a big concern to make arrangements. On the other hand, Taiwan has a very complicated historical and political background that forced it for a long time to deal with a specific group of countries and territories.

Recently papers also started paying more attention on cultural [4, 11], administrative or political [20], institutional [7] distances and more sophisticated geographical distances [2, 3] and found high significance in these determinants. Our results don't differ much from other analyses on the current topic. Such cultural similarity as a common language and a region dummy variable were implemented in the research between EU member states [11]. It was found out that cultural similarity within groups of EU–27 Member States has also positive impact on FDI, what confirms the magnitude of not strictly economic factors. We can state, that in terms of Taiwanese TNCs and their subsidiaries the cultural similarity impacts to not only FDI inflows, but also to the number of subsidiaries in the host country.

As we studied territorial structure and used the number of subsidiaries instead FDI inflow for dependent variable that is commonly used in similar works, it is worth mentioning that this variable doesn't reflect the volume of countries' interaction and the subsidiary in one country is not economically equal to the other. This approach is seldomly used in economic literature and some the statements of our results are hard to confirm with other studies. However, our study shed light on underexplored area. But making geostructural analysis on the data, defining qualitative factors and using them alongside with qualitative ones basing on CAGE distance framework can be recommended for studies, that deal with a big amount of host countries and mappable data. Moreover, the topic and methods we used in our study are poorly highlighted in the economic literature,

and some of the conclusions are impossible to confirm with other studies. Finally, we used only largest Taiwanese TNCs in the electronic industry and their subsidiaries in geostructural analysis and empirical research. All conclusions are valid in terms of Taiwan and should be checked and confirmed with a broader research.

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