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**Three Different Mexicos: Application of the
SWOT Analysis on Three Mexican Regions**

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Year of the defence: 2020

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In Prague on July 31st, 2020

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References

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Abstract

With the decreasing importance of national borders and rise of regions as main actors in economic activity, regional disparities are one of the pressing issues faced by many governments. The objective of this thesis is to look at the case study of trends of Mexican regional disparities. The paper draws from the New Economic Geography, which stresses importance of human and physical capital for economic growth, and Porter's theory of clusters which finds the importance of export for regional development. The paper divides Mexico into three regions: the North; the Centre and the South and uses the SWOT analysis for evaluation of each region. The thesis finds that the North is the region with highest economic performance which is the result of its export-based manufacturing industry. It benefits from its closeness to the US, but it lacks technological research connected to its products, as that takes place in the US. The Centre has been also experiencing growth. Most of its economic activity is located around Mexico City but various clusters have been created in other areas as well. Lastly, the South is the poorest and most diverse region. Its economy is based on oil, tourism and agriculture and it consists of well-performing states as well as of states in vicious cycles of poverty. The paper offers a more general overview of the regional situation in Mexico and puts the situation into perspective, offering a basis for further investigation and potential policy making.

Abstrakt

Se snižující se důležitostí národních hranic a rostoucí rolí regionů jako hlavních ekonomických aktérů, regionální rozdíly se stávají jedním z palčivých problémů, kterým se státy pokouší čelit. Cílem této práce je blíže prozkoumat případ trendů regionálních rozdílů Mexika. Pro to práce využívá Novou ekonomickou geografii, teorii, která zdůrazňuje důležitost fyzického, a především lidského kapitálu pro hospodářský růst, a Porterovu teorii clusterů, která klade důraz na export jako hlavní motor hospodářského rozvoje. Tato práce dělí Mexiko na tři regiony: Sever, Centrum, a Jih a používá SWOT analýzu pro zhodnocení jednotlivých regionů. Dochází k závěru, že Sever jako region se nachází v nejlepší hospodářské situaci, což je důsledek manufakturního průmyslu zaměřeného na export. Tento region těží ze své blízkosti k USA, ale důsledkem nadměrného propojení je na Severu absence technologického výzkumu pro další rozvoj produktů – k tomu dochází v USA. Centrum také zažívá hospodářský růst. Většina ekonomické aktivity se odehrává v okolí Mexico City, ale Centru se podařilo vytvořit několik dalších clusterů i v jiných svých

regionech. Poslední region, Jih, je z daných regionů ten nejrozmanitější, avšak postrádá hospodářský růst. Jeho ekonomika je založená na ropě, turismu a zemědělství. Nachází se v něm jak hospodářsky rostoucí mexické státy, tak státy v bludném kruhu chudoby. Tato práce předkládá všeobecný přehled regionální situace v Mexiku a dává jí do širšího kontextu. Tímto dává základy pro další výzkum a tvorbu mexické regionální politiky.

Keywords

regional development, Mexico, SWOT analysis, cluster, physical capital, human capital, export, regionalism

Klíčová slova

regionální rozvoj, Mexiko, SWOT analýza, cluster, fyzický kapitál, lidský kapitál, export, regionalismus

Title

Three Different Mexicos: Application of the SWOT Analysis on Three Mexican Regions

Název práce

Tři Mexika: použití SWOT analýzy na tři mexické regiony

CONTENTS

TABLE OF FIGURES	3
INTRODUCTION	5
LITERATURE REVIEW	10
1 PART I: METHODOLOGY	12
2 PART II: DEFINING REGIONS	18
3 PART III: DATA ANALYSIS	20
3.1 PHYSICAL CAPITAL	21
3.1.1 <i>Gross Domestic Product (GDP) and economic Growth</i>	21
3.1.2 <i>Foreign Direct Investment</i>	27
3.1.3 <i>Remittances</i>	33
3.1.4 <i>Export</i>	34
3.1.5 <i>Companies</i>	37
3.2 HUMAN CAPITAL.....	39
3.2.1 <i>Job Creation and Employment</i>	39
3.2.2 <i>Education</i>	44
3.2.3 <i>Labour Productivity and Salaries</i>	46
3.2.4 <i>Migration</i>	48
3.3 INNOVATION, RESEARCH AND TECHNOLOGY	50
3.4 FEDERAL GOVERNMENTAL APPROACH	51
4 PART IV: THE SWOT ANALYSIS	55
4.1 THE NORTH	55
4.1.1 <i>Economic Reality and Physical Capital</i>	55
4.1.2 <i>Access to Finance</i>	56
4.1.3 <i>Products and Export</i>	57
4.1.4 <i>Human capital</i>	60
4.2 THE CENTRE.....	61
4.2.1 <i>Economic Reality and Physical Capital</i>	61
4.2.2 <i>Money</i>	63
4.2.3 <i>Products and Export</i>	63
4.2.4 <i>Human capital</i>	65
4.3 THE SOUTH.....	68
4.3.1 <i>Economic Reality and Physical Capital</i>	68
4.3.2 <i>Money</i>	70
4.3.3 <i>Products and Export</i>	71
4.3.4 <i>Human Capital</i>	72
CONCLUSION	75
SUMMARY	78
LIST OF REFERENCES	80
LIST OF APPENDICES	85

Table of Figures

Maps

Map 1: The Division according to Política Nacional de Desarrollo Regional (SEDA-TU 2014) .	19
Map 2: The GDP per federal entity (in million pesos, year 2018).....	21
Map 3: The GDP per capita per federal entity	22
Map 4: Primary sector: Percent of federal entities' GDP.....	25
Map 5: Secondary sector: Percent of federal entities' GDP.....	25
Map 6: Tertiary sector: Percent of federal entities' GDP.....	26
Map 7: FDI inflow in 1994 in millions of dollars.....	30
Map 8: FDI inflow in 2018	31
Map 9: Distribution of total FDI inflow in 2008 (in %)......	31
Map 10: Distribution of total FDI inflow in 2018 (in %)......	32
Map 11: Inflow of Remittances per Federal Entity.....	33
Map 12: Distribution of Remittances in US dollars per capita	34
Map 13: Export in 2008 per federal entity (in US dollars)	35
Map 14: Export in 2018 per federal entity (in US dollars)	35
Map 15: Export change in period 2008-2018 (in percent).....	36
Map 16: Distribution of compnaies accross Mexico.....	37
Map 17: Distribution of companies accross Mexico per 1000 inhabitants	38
Map 18: Distribution of companies with more than 100 employees	38
Map 19: Job Creation (formal job increase in period 2008-2018 in %)	40
Map 20: Location of official indigenous languages in Mexico.....	44
Map 21: Average years of education per active population.....	45
Map 22: Labour Productivity Index	46
Map 23: Average salary (pesos per hour)	47
Map 24: Migration in Mexico	48

Tables

Table 1: the SWOT analysis.....	16
Table 2: The three regions' population, total GDP and GDP/capita in pesos	19
Table 3: Export overview of the three Mexican regions.....	36
Table 4: Employment	41
Table 5: Budget Composition	52
Table 6: The North: the SWOT analysis overview	61
Table 7: The Centre: the SWOT analysis overview.....	68
Table 8: The South: the SWOT analysis overview	74
Table 9: Abbreviations of Federal Entities.....	85
Table 10: GDP; GDP per capita and Population per Federal Entity (year 2018)	86
Table 11: FDI per states in millions of dollars and % of total national FDI inflow.....	87

Figures

Figure 1: GDP per capita versus annual growth of GDP in period 2008-2018 per federal entity	23
Figure 2: Total FDI in millions of dollars	28
Figure 3: FDI per type of investment	29
Figure 4: Formal Job Creation per Region (count)	40
Figure 5: Labour Productivity Index in pesos	47
Figure 6: Migration per state (in %)	49
Figure 7: Net Migration per federal entity (count of people)	50
Figure 8: The North: GDP per capita versus annual growth of GDP in period 2008-2018	55
Figure 9: The North: Exporting Commodities Distribution (for year 2014)	58
Figure 10: The Centre: GDP per capita versus annual growth of GDP in period 2008-2018	62
Figure 11: The Centre: Exporting Commodities Distribution	64
Figure 12: The South: GDP per capita versus annual growth of GDP in period 2008-2018	69
Figure 13: The South: Exporting Commodities Distribution	72

INTRODUCTION

“*In Mexico, there’s a bit of everything*”¹, that is one of the first phrases every Mexican tells you when you ask them about their country. There is even a saying “*There isn’t one Mexico but various.*”² That is the symbolic extent to which the regional differences reach in Mexico. This enormous country with over 120 million inhabitants and nearly 2 million squared kilometres is full of many sorts of varieties and contradictions. Not even the countless pre-Hispanic civilizations ever reached the lengths of the whole region, Mayas in the South, Aztecs in the Centre and many lesser-known indigenous tribes in between. Even the neighbours could not be any more different, the United States at the northern border, one of the richest and the most powerful states on the planet³, Central America in the South, some of the poorest, most violent regions of this planet.

Even though the variety as such might be aesthetically beautiful, it comes with some negative side effects. The economic differences between some of the federal entities of Mexico are striking. The economic performance of Nuevo León versus Chiapas does seem like comparing two completely different states, not two regions belonging to one country. Problems related to economic inequality are even more apparent every time national elections take place, showing not just the economic differences of these two regions, but also the other issues these disparities bring – racism, prejudice that the regions hold against each other. And, therefore, regional differences are one of the topics many politicians try to find solutions to.

However, before any policy is to be designed, it is important to understand, what is the actual situation of the country as a whole. Overall complex analysis is necessary to understand what stands behind these differences before any suggestion on how to tackle them can emerge. Growth and development policies should be region-specific, and for that, it is crucial to understand the region in question. That is the objective of this paper. It does not seek to answer the question whether there are or there are not regional disparities in Mexico. The objective is to identify what is the actual situation and what stands behind these regional differences from an economic perspective.

¹ En México, hay de todo!

² OCDE, *Estudios de la OCDE de Innovación Regional: 15 estados Mexicanos*, OCDE 2009: 24.
<https://doi.org/10.1787/9789264060906-es>

³ As one of Mexican presidents, Porfirio Díaz, said, „Poor Mexico, so far from God and so close to the United States!“

There are various long- and short-term causes of the “different Mexicos”, but the question is, why are they growing and why are they still so pervasive?

In order to answer the question of regional disparities, this paper will be analysed through analytic lenses of New Economic Geography, theory of territorial capital and theory of clusters. New Economic Geography and theory of clusters have been concepts present since the 1990s, and the remaining one – theory of territorial capital is relatively new, designed in the new millennium. That is important, as the science of regional development has been developing rapidly, especially with the rapid change of the concept of “space”⁴. That is a reality that the investigators working in fields connected to regional development or area studies need to face when approaching their research. New Economic Geography is a theory designed by Paul Krugman and its key argument is that economic growth tends to concentrate and is self-reinforcing. Michael E. Porter is the author of the cluster theory. The cluster theory believes that the most crucial for its development and growth is for a region to develop a so-called cluster – *a geographical concentration of interconnected businesses, suppliers, and associated institutions in a particular field*.⁵ The cluster theory stresses the importance of export, as it believes that creating a cluster based on exporting commodity will boost the economic growth the most. The last theory, the theory of territorial capital, is the most recent theory, first introduced in 2001 OECD Territorial Outlook, later further developed by Roberto Camagni and Giovanni Perucca. The theory recommends each region to find its territorial capital – something region-specific that cannot be imitated or taken over by other region, which is the reason, a company decides to base its production there.

These three theories are complementary to each other. Both New Economic Geography and the cluster theory believe in concentration of growth. New Economic Geography specifies some of the key aspects a region should have for its development and emphasizes the importance of human capital. The cluster theory assigns the most importance to basing its economy on already existing

⁴ There is one whole section about „space“ in the book written by Roberta Capello and Peter Nijkamp, *Handbook of Regional Growth and Development Theories* (Cheltenham: Edward Elgar Publishing, 2010) – Part I looking at theories of regional development and space in the context of theories of regional development. With the rise of internet and easier transmission of information, the concept tends to be less and less geographically rooted. There is, therefore, a physical-metric space (real distance), but space can be also identified as a place where development takes place. Theories of regional development then tend to investigate the lengths to which those two differ and what is the connection between them.

⁵ Porter, M. E. 1998, Clusters and the new economics of competition, Harvard Business Review, Nov/Dec98, Vol. 76 Issue 6, p77,

production and industries in the region and to developing them further. The territorial capital theory promotes finding region-specific advantage which each region should find. To summarise, these theories claim that growth is centripetal and self-reinforcing. A region should focus rather on its current situation and base its growth on what it has rather than what is believed to be the most lucrative. Then, each of the theory finds importance in a slightly different area – human capital, exporting commodities and companies, intangible region-specific absolute advantages. Together, they provide a solid base for an analysis and posterior policy-designation.

For the actual analysis the SWOT method will be used, as it addresses both negative and positive issues of every region. The research will focus solely on economic aspects of the regional differences, leaving out social issues, poverty, rule of law etc. Even though these also play significant roles in regional differences, and are to some extent linked to the economic sphere, they are not the objects of this analysis.

This approach may be relevant for various reasons. First, science concerning regional development is surging fast. However, it has mostly been focusing on already developed countries that have been addressing their lacking-behind regions. Or, it has been researching relationships between countries, one country being the developed “core” and the other less developed “periphery”. Nevertheless, there are significant economical differences within developing countries themselves. These issues have often been overlooked as the central governments focus most of their attention on growth of the whole country and feel that it is a necessary trade-off for their development to leave less “lucky” regions behind. The reality, however, might not be that black-and-white – i. e. either national growth or national equality. This paper, thus, tries to draw attention to the perspective that even though national growth is important, regional disparities is an issue not to be overlooked. And it might be more effective in the long run to address the issue earlier rather than later.

The second input of this paper’s approach is the perception of the problem from a broader perspective. Even though this leads to omitting and some extent of oversimplifying, it is still important to take a step back and look at the issue in context. This context helps to look at Mexico as a single country which consists of various regions, as it is impossible to design policies focusing solely on one and omitting the others. Furthermore, the larger picture may provide an important overview of the current situation before going into more detail. Many investigations of regional

differences focus on one issue like, for instance, foreign direct investment or one specific sector, but, for practical use – and policymaking, broader and less detailed analysis is important as a steppingstone for further development of policies.

As mentioned above, there are some flaws to this approach. The nature of regional disparities is very complex, and it is difficult to address everything in detail. Therefore, the nature of this thesis will mostly be descriptive. Even though the paper will not go into much detail, the purpose is to show the overall context which serves for better understanding of the problem and may play a role as a basis for further investigation.

The descriptive part is a side effect of the fact that this paper stands on hard data and numbers. This has both negative and positive effects. Hard data best demonstrate the regional embeddedness of some trends, especially economic ones and helps to visualise regionalism for better understanding. It, nevertheless, leads to more description.

There have been countless books written about regional development. This thesis draws mainly from two collective overviews of regional development theories. The first of them is written in Czech, titled *Teorie regionálního rozvoje* (The Theories of Regional Development), written by Jiří Blažek and David Uhlíř. It serves as a good overview of the theories of regional development. It is, however, very concise on most of the theories and looks more at the transnational regional differences rather than national. The second book is called *Handbook of Regional Growth and Development Theories*, written by Roberta Capello and Peter Nijkamp. This book serves as a thorough overview of the most significant regional development theories, listing both theories and methodologies used for regional development and its measuring.

Concerning Mexico and its regional disparities, there have been various papers written as well. Various papers⁶ use beta convergence and sigma convergence when they research regional

⁶ see: Óscar Rodil Marzábal and Jorge Alberto López Arévalo, “Disparidades en el crecimiento económico de los estados de México en el contexto del Tratado de Libre Comercio de América del Norte”, *ECONOMÍA UNAM* 8, no. 24 (september/december 2011): 83–4, <http://www.scielo.org.mx/pdf/eunam/v8n24/v8n24a4.pdf>

Esquivel, G, and Messmacher, M. 2002. “Sources of (non) Convergence in Mexico”, *International Bank for Reconstruction and Development*, Chief Economist Office for Latin America. Washington D.C.

Gianfranco Viesti, *Diagnóstico de desarrollo regional: México*, EUROsociAL, no. 13, Madrid 2015

Celso Ramón Sarmiento Reyes, “La desigualdad regional en México: un análisis de convergencia”, *Revista de la Facultad de Economía*, BUAP no. 40 (January-June 2009): 90.

disparities in Mexico over time. They find that convergence occurred in the time period of 1940-1985, but with the sudden opening to trade after 1986, Mexican regions started to diverge.⁷ There are many other studies written about Mexican regional development, most of them focusing on one specific aspect, such as the difference in FDI, technological innovation in different Mexican regions (OECD outlook)⁸, etc. Notably, what is lacking, is more broad analysis of such differences, which, as was mentioned already, is an issue that should be addressed more.

There is no doubt that there are striking differences between the three regions this paper identifies. The objective is not to measure the extent of the given differences, but to identify key economic realities of each region that are necessary for its development.

This paper will be outlined as follows, first, there will be short literature review on Mexican regionalism so far, second will be methodology, third, data analysis, fourth, the SWOT analysis, and lastly, conclusion. Methodology will further explain theoretical framework of chosen methodology and SWOT analysis. The Part II will divide Mexico into three regions. Following part will then analyse the data from the national perspective, putting them into more a visual picture. The Part IV will be the SWOT analysis, which will sort the results that data from the Part III shows according to the three regions. Conclusion will then analyse and evaluate the results, placing it back into the larger national picture.

⁷ Reyes, “La desigualdad regional en México”, 90.

⁸ OCDE, *Estudios de la OCDE de Innovación Regional*, 24.

LITERATURE REVIEW

There has been surprisingly little written about Mexican regional disparities. As the developing countries tend to focus more on their national growth and export, especially in terms of GDP and FDI. Therefore, the government, and the investigators themselves, sometimes overlook problem of regional differences.

As mentioned in the introduction, there has been some research around convergence and divergence in Mexico. One of many names are: Esquivel and Messmacher⁹ who wrote paper for the International Bank for Reconstruction and Development about regional disparities in Mexico using beta and sigma convergence. There are various more authors¹⁰ using the same method when investigating regional differences in Mexico.

Some other studies were written about Mexican regional development, most of them focusing on solely one specific aspect, such as the difference in foreign direct investment inflows, technological innovation in different Mexican regions (OECD outlook)¹¹, productivity¹², etc. Notably, what is lacking, is more broad analysis of such differences, which, as was mentioned already, is an issue that should be addressed more.

A significant part of the present research is connected to USMCA (United States-Mexico-Canada) Treaty, previously known as NAFTA¹³. It focuses on its impact on the northern part of Mexico, but it tends to be the main topic of the research. The authors focus on the impact of free trade on regions rather than looking at the regions themselves.

⁹ Esquivel, G, and Messmacher, M. 2002. "Sources of (non) Convergence in Mexico", *International Bank for Reconstruction and Development*, Chief Economist Office for Latin America. Washington D.C.

¹⁰ see: Óscar Rodil Marzábal and Jorge Alberto López Arévalo, "Disparidades en el crecimiento económico de los estados de México en el contexto del Tratado de Libre Comercio de América del Norte", *ECONOMÍA UNAM* 8, no. 24 (september/december 2011): 83–4, <http://www.scielo.org.mx/pdf/eunam/v8n24/v8n24a4.pdf>

Celso Ramón Sarmiento Reyes, "La desigualdad regional en México: un análisis de convergencia", *Revista de la Facultad de Economía*, BUAP no. 40 (January-June 2009)

Reyes, "La desigualdad regional en México",

¹¹ OCDE, *Estudios de la OCDE de Innovación Regional*, 24.

¹² Marcos Valdivia López, „Desigualdad regional en el centro de México. Una exploración espacial de la productividad en el nivel municipal durante el período 1988-2003“, *Investigaciones Regionales*, no. 13 (2008): 5–34.

¹³ Javier Delgadillo Maclas, „Desigualdades territoriales en México derivadas del tratado de libre comercio de América del Norte“, *Revista eure* 34, no. 101 (Santiago de Chile: 2008): 71–98.

One existing overview of Mexican regional situation was written by Gianfranco Viesti – *Diagnóstico de Desarrollo regional: México*.¹⁴ The outlook provides an outline of regional differences in Mexico but does not give any context nor explanation further.

Lastly, there has been one book written by collective authors about Mexico and policies and regional development in Mexico. Its titled *Agenda para el Desarrollo: Políticas de Desarrollo Regional*¹⁵ and it was coordinated by José Luis Calva for the occasion of seminar for “Agenda del Desarrollo 2006-2020” with another 14 volumes about Mexican development. The volume is a collection of various policy suggestions on how to face globalization, migration, trade, poverty etc. in the territorial perspective. As its title suggest, it is more based on policy suggestions rather than on analysis of current situation of Mexico.

The federal government has not been paying sufficient attention to the problem of regional development in Mexico. During the three sexenios between 2001-2018, only the first one set regional differences as its objective in its six-year plan *Plan Nacional de Desarrollo 2001-2006*¹⁶ where Mexican President Vincente Fox creates five “mesoregiones” which are supposed to collaborate on economic issues and set out goals for each of the mesoregion.¹⁷ The program, however, did not receive sufficient funding and the remaining presidents focused more on Mexico as one country rather than its regions.

Overall, Mexican regional disparities have been overlooked and not sufficiently studied in the academic field. This is an issue that the academic world should pay more attention to. As the research have found, the differences are growing and it is an issue that should be addressed before they become too pervasive and difficult to reverse.

¹⁴ Gianfranco Viesti, *Diagnóstico de desarrollo regional: México*, EUROsociAL, no. 13, Madrid 2015

¹⁵ José Luis Calva, eds., *Agenda para el desarrollo: Políticas de desarrollo regional*, (Volume 13, Miguel Ángel Porrua, México 2007).

¹⁶ Plan Nacional de Desarrollo 2003-2006, *Secretaría de Planeación y Desarrollo Institucional*, Gobierno de México <http://planeacion.uaemex.mx/InfBasCon/PlanNacionaldeDesarrollo2000-2006.pdf>

Plan Nacional de Desarrollo 2013-2018, Gobierno de México, <https://www.gob.mx/epn/acciones-y-programas/plan-nacional-de-desarrollo-2013-2018-78557>

¹⁷ „Enfoque regional y sustentabilidad“, *Gobierno de México*, <https://www.gob.mx/cms/uploads/attachment/file/67641/CAP-08.pdf>

1 PART I: METHODOLOGY

Regional development is a relatively recent concept embraced by many countries and regions of the world. With the world diverting from concepts of countries and nations, more and more focus is devoted to the regions within each state. Thus, the scientific research behind regional development has been evolving rapidly in recent years, being as controversial as any other economic theory. One of the reasons it has attained such scrutiny is because of the European Union, as the term territorial cohesion (“*focusing regional and national territorial development policies on better exploiting regional potential and territorial capital with given importance on connectivity, territorial integration*”¹⁸) has been created. The first part of this paper will present the theory and methodological approach used for the data analysis in the paper.

Before going into the theoretical approach and methodology of this thesis, it is important to understand the basic concepts and terminology related to regional development and regional disparities. The concept most often referred to, is agglomeration theory. This concept has been present since the beginning of the 20th century and was authored by Alfred Marshall (1920). He finds that there are various increasing returns to scale that come with concentrations of economic activity in one place. Firstly, transportation cost savings, i. e. the companies have access to infrastructure already existing in the region (both physical as well as producer networks). The next saving comes from the fact that with concentrations of workers in one place, it is easier to choose employees needed for the job required, even more so for jobs that require a specific skillset or education. Lastly, there is the occurrence of so-called knowledge spillovers, meaning that with concentration, the companies exchange knowledge and know-how faster and more easily.¹⁹ Agglomeration theory has been further developed and transformed into New Economic Geography; a concept introduced by Paul Krugman in the 1990s. He accepts agglomeration forces promoted by Marshall and develops them into a model. He emphasises the importance of human capital, elevating its importance above physical one.²⁰

¹⁸ Roberta Capello and Peter Nijkamp, *Handbook of Regional Growth and Development Theories* (Cheltenham: Edward Elgar Publishing, 2010), 3.

¹⁹ Capello and Nijkamp *Handbook of Regional Growth and Development Theories*, 50, Jiří Blažek and David Uhlíř, *Teorie regionálního rozvoje*, (Praha: Karolinum, 2002).

²⁰ Blažek, “Nová ekonomická geografie a nová teorie růstu“ in *Teorie regionálního rozvoje*, 69–75.

This leads to various questions a state needs to answer when addressing regional differences. The first of them being: Why is it important to tackle regional disparities. There are various studies finding that concentration of the economic development stimulates faster growth of the states' GDP.²¹ That goes even further as there exists so-called “circular causation” between agglomeration and growth, as growth promotes agglomeration and agglomeration supports growth.²² That indicates that regional disparities are to some extent necessary for the development and there is a trade-off between growth and regional equity. However, apart from political reasons (authorities cannot decide to leave one region behind only for national economic reasons), the research also indicates that at some point, too big of inequality between regions slows down the national growth, and might have some adverse side effects on all regions – not just those lacking behind (migration, insecurity, crime etc.).²³ This implies that regional differences are not to be ignored.

The second question is, what role should the government play in addressing regional disparities. The classical and neoclassical theory believed that regional disparities will vanish in the long run, believing that the core will, after some time, incorporate the peripheries.²⁴ Local monopoly benefits from concentration of knowledge which will spillover to surrounding region and, thus, stimulate growth in peripheries as well, leading to convergence.²⁵ This concept has, however, been abandoned as now most economic theories see at least some extent of intervention of central government as necessary for the development of a region that is lacking behind.²⁶

There is, however, another trade-off the government faces. Improving infrastructure in the core regions further fosters agglomeration and growth – leaving the less developed regions behind. And better inter-regional connections can also increase regional inequality instead of decreasing it, as improved infrastructure may further foster agglomeration.²⁷ According to this perspective there are two possible kinds of policies, one of them being interregional and intra-core infrastructure that helps to foster agglomeration in the core region as well as growth. Policies that are designed for

²¹ Ibid.

²² Capello and Nijkamp, *Handbook of Regional Growth and Development Theories*, 33.

²³ Blažek, “Nová ekonomická geografie a nová teorie růstu“, 70.

²⁴ Capello and Nijkamp, *Handbook of Regional Growth and Development Theories*, 3.

²⁵ Ibid, 23.

²⁶ Blažek, *Teorie regionálního rozvoje*, 43.

²⁷ Capello and Nijkamp, *Handbook of Regional Growth and Development Theories*, 50.

infrastructure solely in the periphery serve as relocation from the core to the peripheral regions but are not supporting growth.²⁸

In any case, for the development of proper policies, it is important to understand the regions in detail as well as their disparities. That is, to some extent, the objective of this thesis: measure key aspects of economic development of each region and try to identify main areas in need of improvement.

There are, however, countless different ways to study regional differences and development, each one having its own benefits and disadvantages, each one showing different implication and solutions. Thus, as the objective of this thesis is not only to measure the differences of each region, but also to look for some potential benefits and implication for the future, this thesis will work with another two theories; those being the theory of clusters and the theory of territorial capital.

The first approach stands on the theory of clusters. The term has been around for some time, but the latest version was further developed by Michael E. Porter. For Porter, companies are the backbone of development; firms focusing on export in particular. He believes that the fuel for development is export as it is important for the attraction of capital and other resources. The export-based companies then create so-called clusters, which are groupings of companies, producers and other services connected to one sector, having all of the benefits of agglomeration economies. According to Porter, clusters are: “...*geographic concentrations of interconnected companies and institutions in a particular field. They encompass an array of linked industries and other entities important to the competition.*”²⁹ These clusters then attract other companies, especially connected with services, that have little to do with the clustered industry (e.g. restaurants, printers, marketing companies etc.).

We might summarise Porter’s cluster theory by saying, that, according to Porter, regions should not focus on industries that they find lucrative (like nanotechnologies, or creation of another Silicon Valley) if they do not possess any basis for them in the first place. They should rather focus on those industries they already have (even agriculture or mining), creating clusters focusing on these commodities, and then creating innovation connected to them. This way, they can make use of

²⁸ Ibid, 50.

²⁹ Michael E. Porter, “Clusters and the New Economics of Competition”, *Harvard Business Review*, (November-December 1998), <https://hbr.org/1998/11/clusters-and-the-new-economics-of-competition>

increasing fragmentation of global value chain and make long-term profit. This theory, therefore, leaves behind the previous belief that exports should be primarily diversified. Porter believes that focus on one sector or commodity will kickstart the economy and the diversification will come later naturally. This concept is not new, as diversification as the leader of growth has been recently abandoned in the literature. There is a belief in the so-called *learning by doing* or *learning by exporting*, as the region will access new technology and knowhow through exporting, thus starting to diversify without the need for further incentives.³⁰

The third theory used is called the theory of territorial capital. The theory of territorial capital was first outlined by OECD in 2001 *Territorial Outlook*³¹, then further developed by Roberto Camagni and Giovanni Perucca, on Italian and European examples. The theory stands on the fact that there are various forms of capital which influence where economic activity takes place and the so-called territorial capital is a concept you want to base your growth on.³² Perucca defines territorial capital as “*the system of territorial assets of economic, cultural, social and environmental nature that ensures the development potential of places. The potential of this concept resides in the recognition of possible interactions between factors of different nature.*”³³ The authors claim that territorial capital is what generates the fastest growth and helps the region the most to develop, as it is an absolute advantage the region has compared to others (it might be trust, unwritten codes and rules, relational capital etc.).³⁴

This concept has, however, various flaws. As it is very broad and all-encompassing term, it is very difficult to identify and measure. Even the OECD Outlook, which mentions territorial capital, was unable to give more detailed instructions in that matter.³⁵ However, in the world of competing regions, it is important for regions to find comparative or absolute advantage, and that is something worth looking into further. Therefore, even though the territorial capital is a very broad concept, it

³⁰ Sandra Edith Medellín Mendoza, Miguel Alejandro Flores Segovia, Amado Villarreal González, „Análisis regional de sofisticación y centralidad de las exportaciones mexicanas“, *Ensayos Revista de Economía* 36, no. 2, 151–152.

³¹ OECD, *OECD Territorial Outlook*, OECD 2001.

<http://www.oecd.org/newsroom/theoecdterritorialoutlook2001.htm>

³² Capello, *Handbook of Regional Growth and Development Theories*. 122.

³³ Giovanni Perucca, „The Role of Territorial Capital in Local Economic Growth: Evidence from Italy“, *European Planning Studies* 22 (2014), 540.

³⁴ Capello, *Handbook of Regional Growth and Development Theories*. 122.

³⁵ OECD, *OECD Territorial Outlook*

is an approach that might help less developed (as well as more developed) territories of Mexico to identify their own potential for further development.

Looking at the regions and the regional development through the lenses of New Economic Geography, territorial capital and the cluster theory, for the actual analysis of the regions the SWOT (strength, weaknesses, opportunities, and threats) analysis will be used (see Table 1). It is an approach that looks at current positive and negative aspects of the region, also distinguishing them into internal and external. Positive factors should be fostered and developed further, negative should be tackled. Internal are those coming from within the region, theoretically easier to change and influence, whereas external cannot be influenced, but can be addressed (if positive) or prevented or be prepared for if negative.

Table 1: the SWOT analysis

	Positive	Negative
Internal	Strengths	Weaknesses
External	Opportunities	Threats

The SWOT analysis will be used because it will show the current economic situation of the state and does not only show where the problems of the region lie at the current trajectory. It helps to understand a region’s capabilities and capacity.³⁶ It shall, therefore, approach all three territories with the same urgency, not just finding flaws in the poorer regions and it can thus serve as a basis for policymaking.

For the actual SWOT analysis, the outline of the U.S. Economic Development administration was used together with the theoretical framework already stated. That outline looks at the current economic trajectory of the region and where does the region access money for its growth. Another questions the SWOT will be asking is: What is the region exporting and what are the regional clusters? What does the human capital and labour force look like – one of the crucial bases for the development according to New Economic Geography.

As mentioned in the Introduction, these three theories are to some extent complementary. Each one of them approaches regional development and growth from different angle, but together they create a solid base for research of current economic trajectory of each region. Together these theories

³⁶ „SWOT Analysis: An in-depth analysis of regional strengths, weaknesses, opportunities and threats“, U.S. Economic Development Administration, <https://www.eda.gov/ceds/content/swot-analysis.htm>

identify various key aspects that support or deter economic growth. This enables the paper to distinguish which data to investigate and which are not that relevant for set objective. The theories help to set a framework which accepts basic agglomeration forces explaining why growth accumulates. It articulates key aspects necessary for growth in the 21st century: human capital, innovation, but also physical capital and exporting commodities which are still necessary for development.

The current economic outlook will be addressed through data analysis of GDP, annual growth and sectoral analysis of each region and federal entity. The access to funds will be outlined through an overview of the inflow of foreign direct investment (FDI), access to remittances and federal funding. The clusters and export will be analysed through identification of main exporting sectors and distribution of companies across Mexico. Analysis of human capital will be approached through various data sets; intra-state migration (which is interlinked to job creation), formal and informal employment, education and, lastly, labour productivity, which is an index investigated by official governmental agency COMOVAMOS.³⁷

As this thesis seeks to find the most current Mexican situation, it uses data from year 2018, where one of the biggest periodic economic censuses took place (it takes place every 10 years). When comparing data, the comparison will be over 10 years, from the year 2008 to 2018. Even though year 2008 may indicate some distortions (because of the financial crisis), it is still relevant and is able to project the current trend. It might be even more useful, as it shows the economic trajectory after the crisis – an important milestone of the economic development of Mexico.

³⁷ official website: <https://www.mexicocomovamos.mx/>

2 PART II: DEFINING REGIONS

Before the beginning of the analysis, it is important to establish the regions. That by itself might be a challenge as there are many possible ways that can be used as there are 31 states (federal entities) and Federal District (Distrito Federal - Mexico City) in Mexico. The paper will divide Mexico into three regions (see Map 1): the **North** (Baja California, Baja California Sur, Coahuila, Chihuahua, Durango, Nuevo León, Sinaloa, Sonora, Tamaulipas, Zacatecas), the **Centre** (Aguascalientes, Colima, Mexico City, Guanajuato, Hidalgo, Jalisco, Estado de México, Michoacán, Morelos, Nayarit, Querétaro, San Luis Potosí, Tlaxcala and Veracruz) and the **South** (Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Yucatán). It is a division made in *Diagnóstico de Desarrollo Regional: México*, written by Gianfranco Viesti³⁸.

This particular division was chosen as the most useful for the purpose of the research, as it is made based on geographical proximity and economic similarities, even though it has some limitations. There are exceptions in each of the regions. Despite being the richest region, the North also encompasses states with relative low GDP per capita, as we can see in Map 3 and 4 (Zacatecas, Durango). The relatively rich Centre has Tlaxcala, which would, with its GDP per capita of around 74 619 per capita³⁹, rather belong to the Southern region, but its geographical location leaves it in the Centre. The South, on the other hand, has many more disparities and exceptions, that seemingly elevate the region's economic output. Firstly, Tabasco and Campeche both increase the average GDP per capita because of their oil extraction. However, even though they can be considered rich, both will face economic problems in the future as their economy is based solely on extraction of petroleum and, furthermore, people living in these federal entities do not have access to the oil revenue. Secondly, both Quintana Roo and Yucatán have been growing steadily thanks to tourism. Even though these two federal entities do not follow the downward trend of the South, it will be considered during the analysis.

Table 2 puts the regions into context, showing that the North is the one with the highest GDP per capita, followed by the Centre and the South, with the lowest GDP per capita of them all. The Centre concentrates the most population, but it also has the most federal entities.

³⁸ Viesti, *Diagnóstico de desarrollo regional: México*, 7.

³⁹ INEGI

Another possible way to divide Mexico would be by highlighting the most productive regions. There are four of them: the central zone around Mexico City; the zone of high production (Jalisco, Guanajuato, Puebla, Querétaro), the North (Nuevo León, Baja California, Sonora, Chihuahua, Coahuila, Tamaulipas) and the oil producing regions on the Yucatan peninsula (Campeche, Tabasco) – method also mentioned by Viesti.⁴⁰ This method, however, leaves out less productive regions, and thus, does not serve for the purpose of this thesis.

Other sources (for example Mexican central bank Banco de México)⁴¹ divide the country into 4 regions (North, Centre-North, Centre, and South). For practical reasons, three main regions are enough to demonstrate main trends and further divisions are not necessary.

Table 2: The three regions' population, total GDP and GDP/capita in pesos⁴²

	Population	Total GDP (million pesos)	GDP/capita (pesos)
Centre	74 565 004	10 193 165	136 702
North	29 918 324	5 078 619	169 749
South	20 511 238	2 322 111	113 212

Map 1: The Division according to Política Nacional de Desarrollo Regional (SEDA-TU 2014)



⁴⁰ Viesti, *Diagnóstico de desarrollo regional: México*, 8.

⁴¹ Banco de México, <https://www.banxico.org.mx/>

⁴² INEGI

3 PART III: DATA ANALYSIS

The following chapters will analyse data and show overall economic characteristics of the regions. It will look at the data from a national perspective, showing, how the regions differ on the national level. This will not serve as a measurement of differences between the regions, but it will serve as a basis for the SWOT analysis which will be done in the subsequent part of the paper. Nevertheless, most of the data will be projected on Figures and Maps for better visualisation of the trends, showing the space-rooted trends in a more accessible way.

There will be various data sets projected. First, physical capital, more specifically overall GDP, GDP per capita, and sectoral division according to GDP, followed by analysis of inflow of FDI and remittances. The next chapter will look at where the main focal points of the exports and the distribution of companies across Mexican federal entities. Second, human capital of each federal entity will be investigated, namely the employment, education, labour productivity and migration. The following chapter will look at where technological research and innovation takes place in Mexico. The last chapter of Part III will present a short overview of the approach of the federal government to regional development. This chapter will look at programs targeting regionalism – if there are any, and what is the government’s policy around finance redistribution in Mexico. The data obtained was mostly gathered through INEGI (Instituto Nacional de Estadística, Geografía e Informática), an official governmental agency of Mexico which serves as an abundant source of economic data and indexes for Mexico.⁴³

Before getting into the data-projection, it might be useful to quickly mention the Mexican macroeconomic situation, as it is also an indicator, having an influence over the development of the country, as well as the development of its regions. Mexico has achieved macroeconomic stability which it learnt after experience from the Tequila crisis. The country has an independent central bank (Banco de México), low interest rates, and does not have a significant fiscal deficit. That helps Mexico to focus on exports, as it is a net exporter (its exports are higher than imports). The country also has a great opportunity to make use of United States-Mexico-Canada Agreement (USMCA), formerly known as North American Free Trade Agreement (NAFTA).⁴⁴

⁴³ INEGI, Banco de Información Económica,
<https://www.inegi.org.mx/sistemas/bie/?idserPadre=10200070#D10200070>

⁴⁴ OCDE, *Estudios de la OCDE de Innovación Regional*, 48.

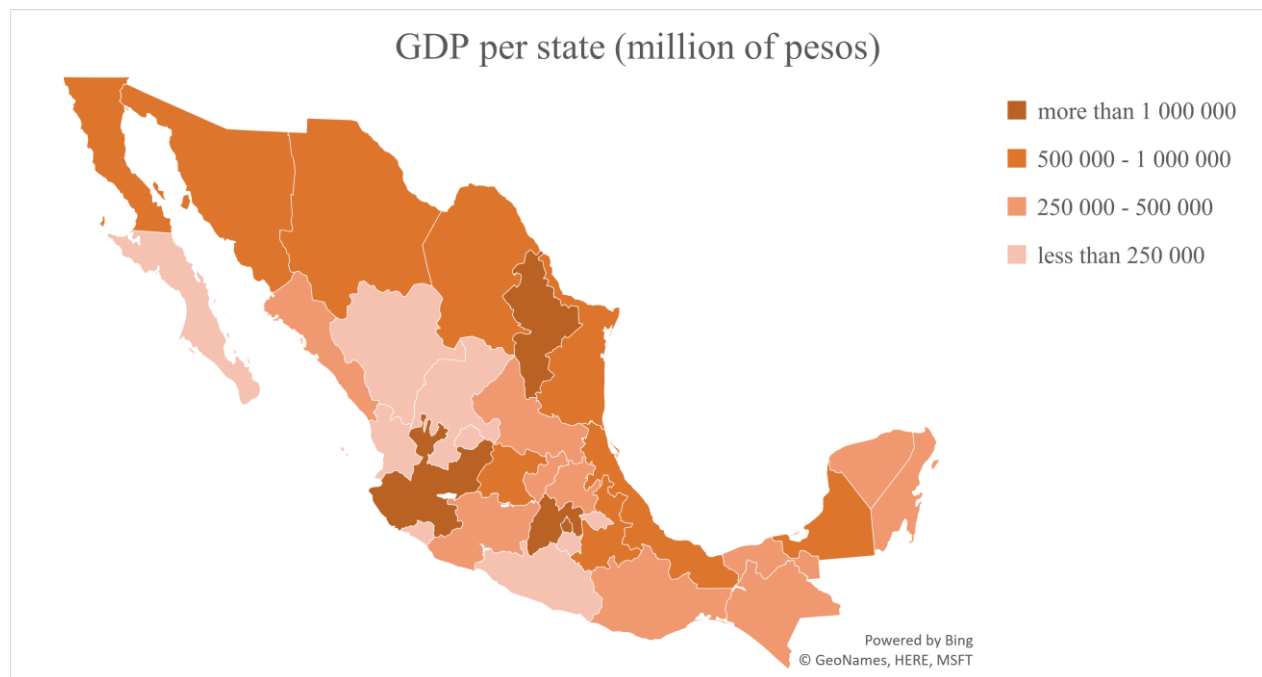
3.1 PHYSICAL CAPITAL

3.1.1 Gross Domestic Product (GDP) and economic Growth

One of the basic indicators of regional development is the Gross Domestic Product (GDP) and the Gross Domestic Product per Capita (GDP per capita). The first one shows where the economic activity is located and how well the region is performing. The second one, the GDP per capita, then projects the region's economic performance with consideration to its population density. These indicators, however useful they may seem, still omit some very important facts and characteristics of the regions.

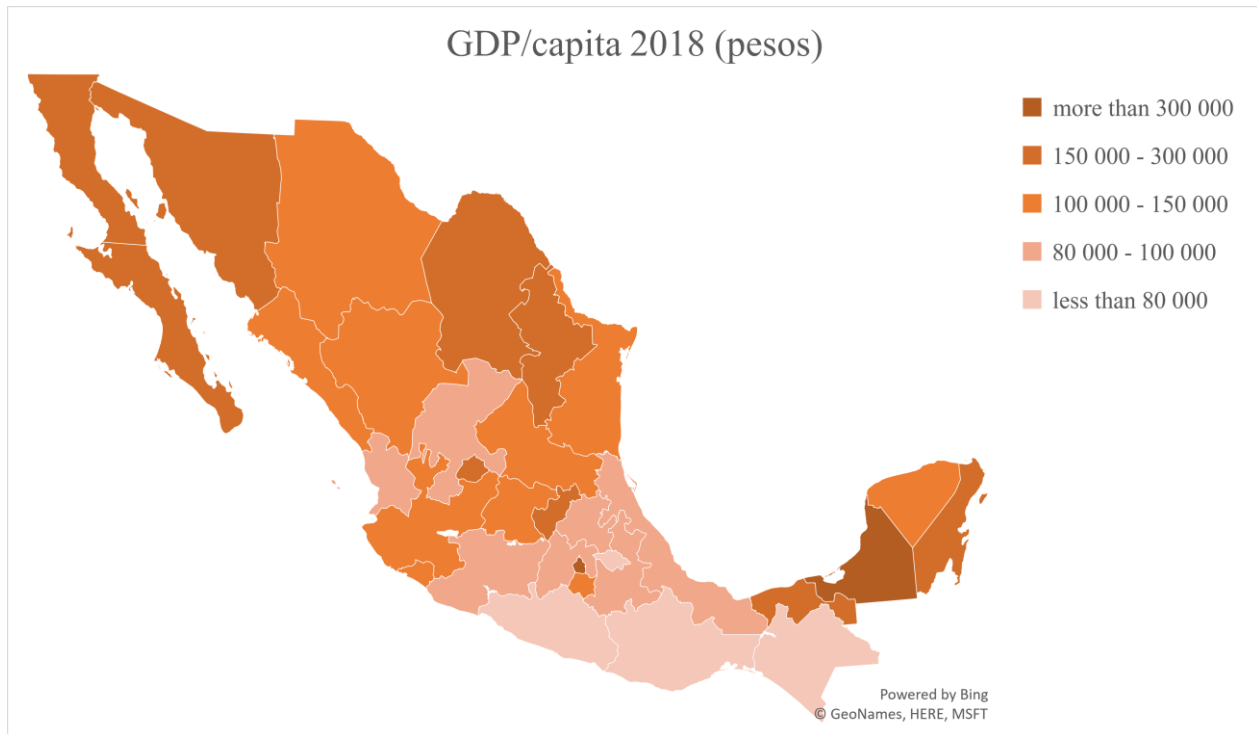
In order to grasp a basic outline and understanding of the economic situation and its distribution across Mexico, two indicators were evaluated. The first indicator is GDP per individual Mexican state (see Map 2). It demonstrates the importance centre of economic activity in Mexico. However, to truly obtain the proper nature of each federal entity, GDP per capita needs to be calculated (see Map 3).

Map 2: The GDP per federal entity (in million pesos, year 2018)⁴⁵



⁴⁵ INEGI; Banco de informacion economica,
<https://www.inegi.org.mx/sistemas/bie/?idserPadre=10200070#D10200070>

Map 3: The GDP per capita per federal entity⁴⁶



Map 2 and 3 demonstrate that Mexican economic activity both in terms of GDP and in terms of GDP per capita, tends to be concentrated. As for GDP, multiple centres can be identified. The highest concentration of economic activity is around Mexico City (Mexico City has 18% of the total national GDP and Estado de México has 9%), followed by the Northern states Nuevo León (7%), Jalisco (7%) and Veracruz (5%). In terms of GDP per capita, data shows high productivity in states on the border with the United States; the Centre, leading with Mexico City, whose GDP per capita reaches more than double the national GDP per capita (356 thousand pesos per capita in Mexico City, whereas the national average is about 141 thousand pesos per capita); and Yucatan, which can be mostly attributed to the oil industry in Campeche and tourism in Quintana Roo. Maps 2 and 3 also show that there is no significant economic activity in the South's states bordering Central America, as they are left behind, lacking their own centre of economic activity.

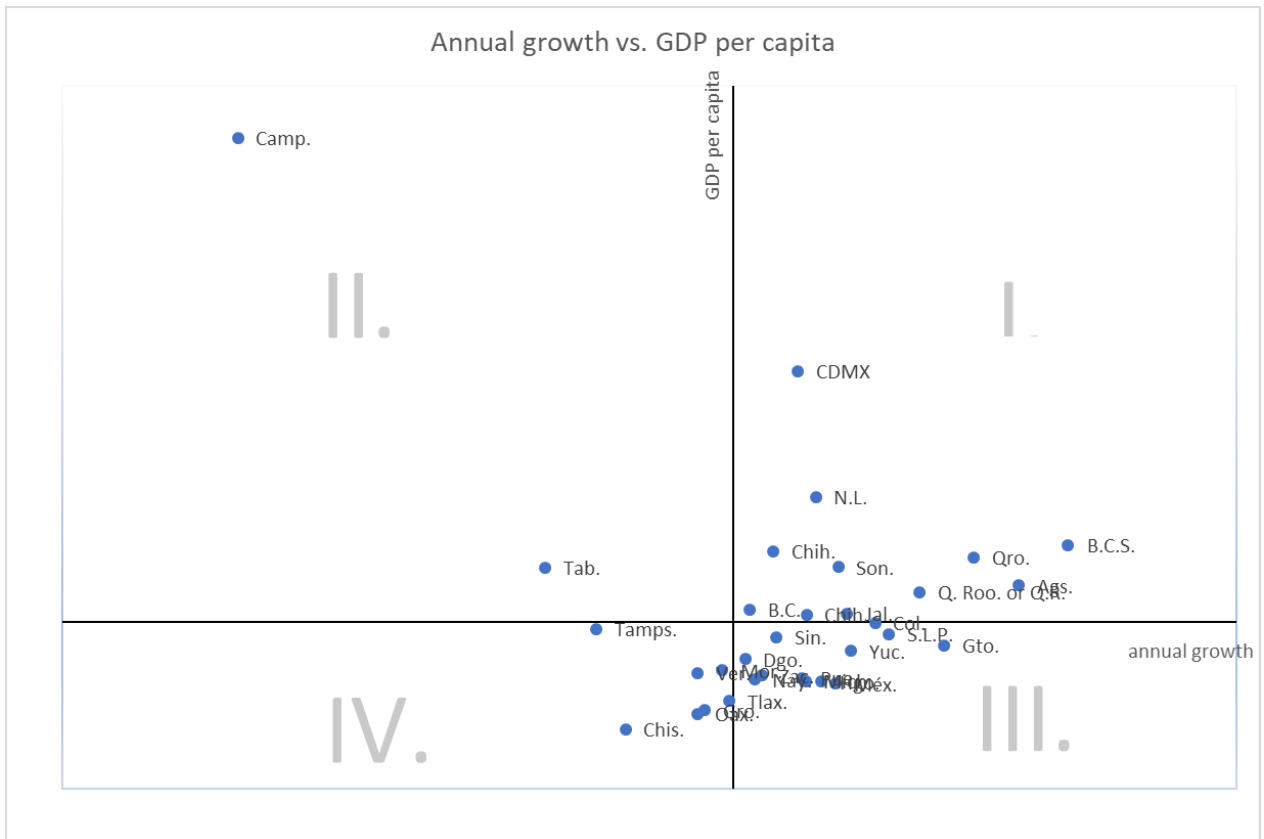
To summarise, there are two types of wealthy areas in Mexico: built-up areas such as Mexico City and the Monterrey area (Nuevo León), with high population and economic activity; and areas with

⁴⁶ Author's calculation based on data from INEGI, for further breakdown see Appendix, Table 2

low population density but some high value-added dominant activities such as Campeche (oil production), and Quintana Roo and Baja California Sur (both tourism-intensive).⁴⁷

Additionally, after identifying where the economic activity is located, the trend can be observed over time by adding regional annual growth of GDP into consideration (see Figure 1). This attribute will help further comprehension of the trend each federal entity is heading in the long term.

Figure 1: GDP per capita versus annual growth of GDP in period 2008-2018 per federal entity⁴⁸



Looking at the Figure 1, it shows each state's growth compared to national averages. The horizontal axis shows the national average of GDP per capita (141 922 pesos per capita) whereas the vertical axis stands for the overall average of national growth during the ten-year period between 2008 and 2018 (2%).

We can break the Figure into 4 Quadrants. The first being above the horizontal axis and to the right of the vertical one (I). These federal entities have income per capital higher than the national

⁴⁷ OECD, *OECD Territorial Outlook*, 80.

⁴⁸ INEGI, own calculation, data 2008-2018, further breakdown of the regions can be found in Part III, for the Abbreviations, see the Appendix, Table 1

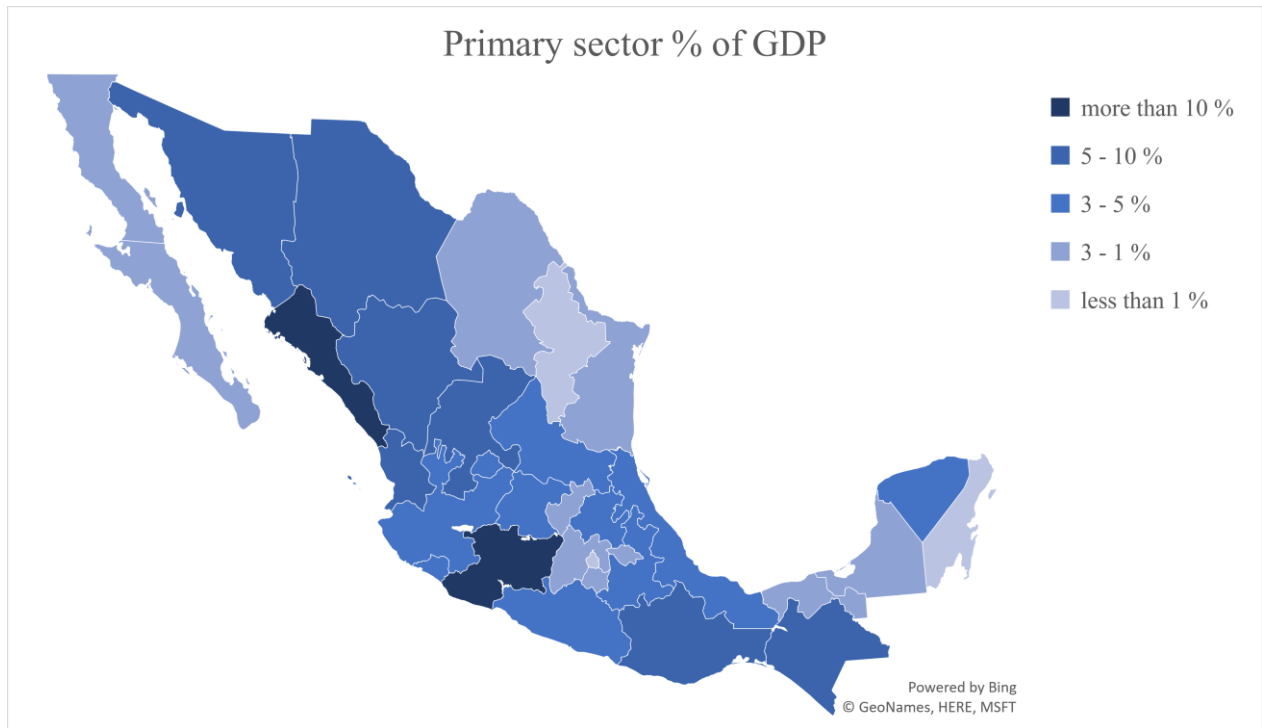
average and grow faster than the national average. That makes them the core of the current economic activity in Mexico and with the current trajectory they will stay that way for the foreseeable future. Most of the states with a GDP per capita above average are in this Quadrant – notably Mexico City and states bordering the United States (the Border States). Second Quadrant (II.) are federal entities whose GDP per capita is above the national average line which, however, do not grow in line with the national average. Those are states that should improve their long-term state strategies for growth, otherwise, in the long-term, they could end up below the national average GDP per capita. One striking example is Campeche, whose overall GDP fell about 49% during last the 10 years (yearly average of -4%). Quadrant III. encompasses states to the right side of the vertical axis and below the horizontal axis. These federal entities have relatively low GDP per capita, however, they are growing above the national average and, thus, have very high potential for the future. States remaining in the last Quadrant (IV.) not only have very low performances in terms of GDP per capita, but also in terms of annual growth. These states are the most problematic, as they not only lack economic activity, but they need to find their focus of economic activity or they will be left behind more and more. We may see that Oaxaca, Chiapas and Guerrero are all on this side of the line.

All investigated data therefore shows that regional disparities in Mexico are regionally rooted, and the data also indicates that those regional disparities are growing over time, as the states with the highest GDP per capita grow more rapidly than those with low GDP per capita.

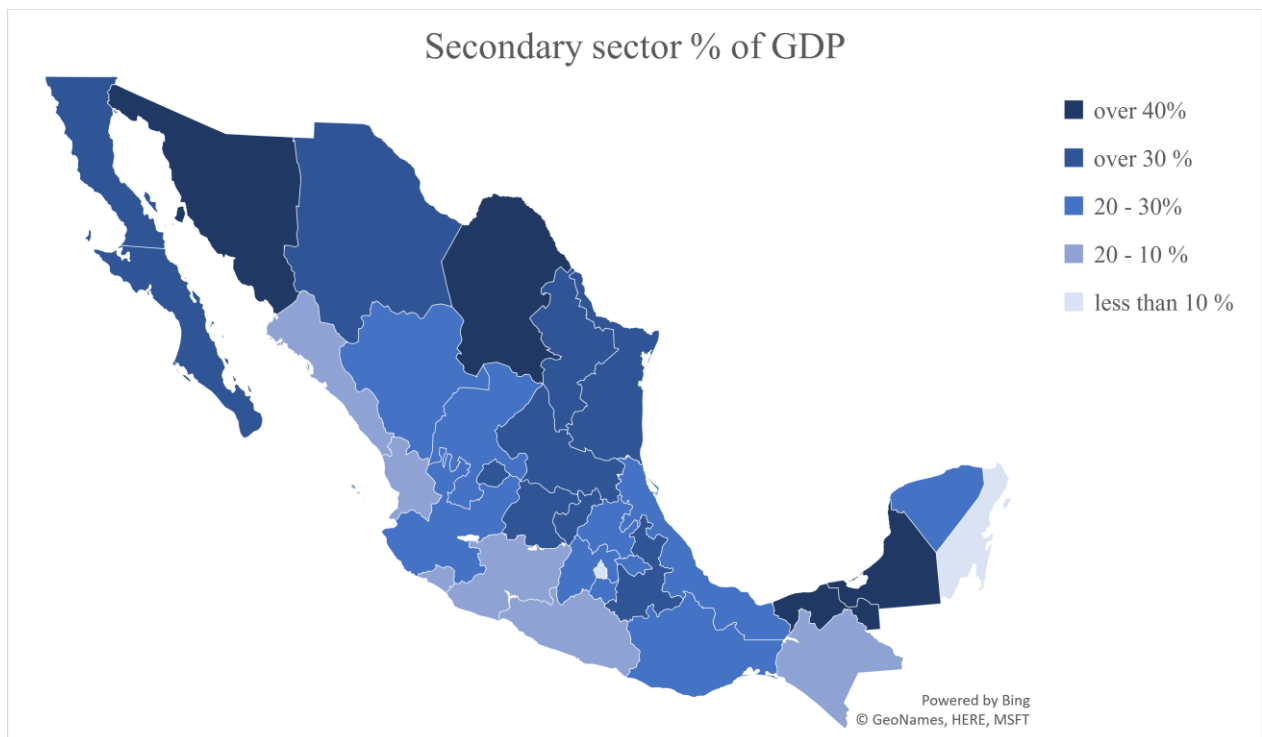
2.2.1.2 Sectorial reality

The last statistics of GDP that will be investigated are the divisions into sectors of each federal entity. It will demonstrate what kind of activity takes place in the region and where its economy is based. For the actual breakdown, see the following maps (Map 4, Map 5, Map 6)

Map 4: Primary sector: Percent of federal entities' GDP⁴⁹



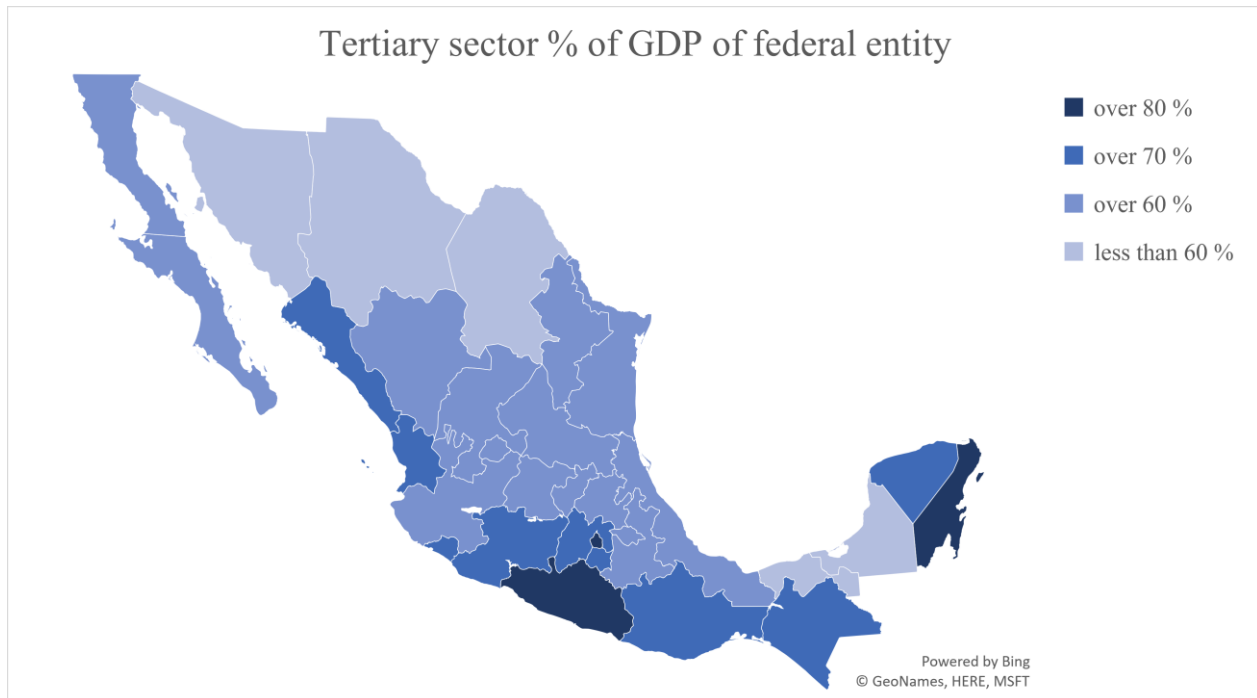
Map 5: Secondary sector: Percent of federal entities' GDP⁵⁰



⁴⁹ INEGI

⁵⁰ INEGI

Map 6: Tertiary sector: Percent of federal entities' GDP⁵¹



When we look at the break down of the GDP of the states into sectors, we can identify what generates income for each of the regions. The states whose primary sector (Map 4) is significant are Michoacán (the Centre), and Sinaloa, Zacatecas and Durango, all three belonging to the North, but neither of them is on the border with the United States. The secondary sector (Map 5) plays a significant role in the North, more specifically the states bordering the United States. These federal entities have their GDP based on the manufacturing industry. Another region receiving its revenue from the secondary sector is the region with both of the petroleum-producing states – Campeche and Tabasco.

The last map (Map 6) shows percentages of the tertiary sector. Services are gaining more and more significance for the growth of the states. The most developed countries in the OECD base their economy on services.⁵² That is the case for Mexico City and a few its surrounding states. It also applies to two states of the South Region, Yucatan and Quintana Roo, which base their economy on tourism. However, the case for of the three Southern states (Oaxaca, Guerrero and Chiapas) is

⁵¹ INEGI

⁵² OECD statistics, „Value added by activity – Services“, <https://data.oecd.org/natincome/value-added-by-activity.htm>

different. These states do not have any significant exporting commodity in the primary nor secondary sector, thus ending up working in services, but without any significant growth.

From the data, we can identify main sectorial clusters of economic activity in Mexico. The primary sector is oriented in Durango, Zacatecas, Sinaloa and Michoacán. These states specialize in the agroindustrial sector.⁵³ Manufacturing is located in the North (at the border with the United States), but also in some federal entities in the Centre – Coahuila, San Luis Potosí, Guanajuato, Aguascalientes and Campeche.⁵⁴ Each region has different industrial branches. Northern border states specialize in manufacturing (transport equipment and automotive branches together with services connected to these). States in the Centre and around Mexico City are focused on infrastructure, automotive and automobile parts, and manufacturing activities.⁵⁵

The tertiary sector is important in Mexico City and its surroundings, especially in chemistry, but also commerce in branches with food and drinks. There is also a growth of tourism in Quintana Roo, Guerrero, Baja California Sur and Mexico City.⁵⁶

3.1.2 Foreign Direct Investment

One of the main reasons for the opening of developing countries to trade is to attract and to accelerate the inflow of foreign direct investment (FDI). The FDI may play a significant role for development as it helps the region to access finances it lacks. Overall, Mexico was successful in this objective, as from year 1994 the investment inflow has increased more than 3-fold (from 10.6 billion of US dollars in 1994 to 33.6 billion in 2018). Figure 2 shows the trend of growing FDI in this specific period. In fact, FDI plays a crucial role for the income of Mexico as it places as the fourth most significant access of finance – after the export of oil, remittances and tourism.⁵⁷

⁵³ OCDE, *Estudios de la OCDE de Innovación Regional*, 87.

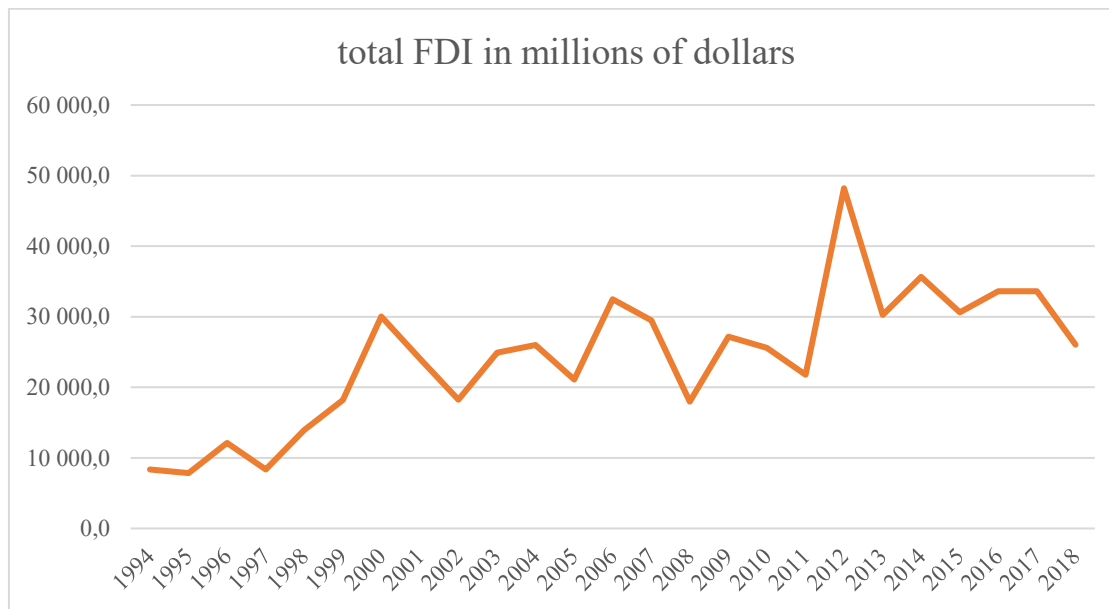
⁵⁴ Ibid, 78.

⁵⁵ Ibid, 87.

⁵⁶ Ibid, 78.

⁵⁷ María Yira Figuerola Olvera, *Inversión Extranjera Directa en México: Un Análisis de sus Resultados en el Periodo 1980-2010*, UNAM, 13.

Figure 2: Total FDI in millions of dollars



FDI may play a crucial role in finding finance for projects and development that would be difficult to accumulate otherwise. It is inherently connected to trade, thus it will stimulate more exports which is crucial for developing countries. Foreign investment also tends to flow into profitable sectors that foster growth and productivity of the region, furthermore, FDI might help to create jobs and enhance competitiveness.⁵⁸ This claim, however, can be put into question after further scrutiny. FDI is important for the growth, but unregulated, it can create many negative externalities⁵⁹ starting with its possible impact on other sectors of the region to its impact on the environment. According to UNCTAD, FDI is important, but the investments that make the most difference are so-called “greenfield” investments.⁶⁰ Greenfield investments are those investments where *foreign investors build a new productive unit from scratch*.⁶¹ The nature of the investments in Mexico can be seen in Figure 3. The Figure shows that the greenfield investments tend to be the ones which are most volatile, whereas the other types of investments (reinvestments and transfers between companies⁶²) are growing steadily.

⁵⁸ Ibid.

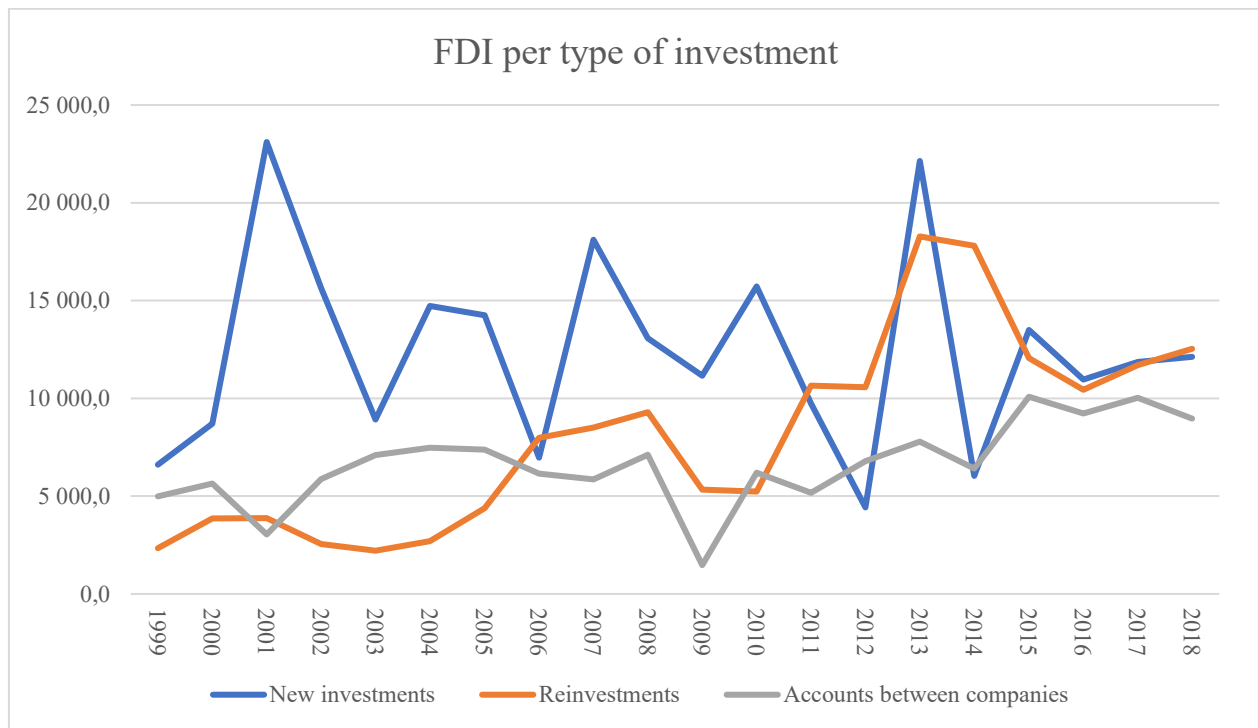
⁵⁹ „Negative Effects of FDI In Host Countries Economics Essay“, *UK Essays*, (November, 2018): <https://www.ukessays.com/essays/economics/negative-effects-of-fdi-in-host-countries-economics-essay.php>

⁶⁰ Olvera, “Inversión Extranjera Directa en México”, 4.

⁶¹ Philipp Harms, Pierre-Huillaume Méon, „Good and bad FDI: the growth effects of greenfield investment and mergers and acquisitions in developing countries“, 3. <https://www.etsg.org/ETSG2012/Programme/Papers/204.pdf>

⁶² transfer of assets between a parent company and its subsidiary

Figure 3: FDI per type of investment



As mentioned before, FDI may play a significant role in development, not just for a country, but for regions as well. Yet, there are several prerequisites necessary for this investment attraction to occur. To be able to attract FDI, a region needs to have either a geographic advantage, infrastructure, economic development or required education.⁶³ Thus, FDI may even play a role in reinforcing the regional inequalities, if not addressed properly.

The opinions on the role of the FDI on employment and salaries are divided. On one hand, foreign companies may play a role in technological investment as they spend money on new research and technology in the region, leading to higher productivity and salaries. On the other hand, some say⁶⁴ that is not the case, as some evidence indicates that productivity and salaries per worker tend to be higher in companies with less than 50% of FDI. Harms and Meón also find evidence that greenfield investments are the only ones generating growth, the other ones having little to no impact on economic development.⁶⁵

⁶³ Olvera, "Inversión Extranjera Directa en México", 17.

⁶⁴ OCDE, *Estudios de la OCDE de Innovación Regional*, 24.

⁶⁵ Harms, „Good and bad FDI“, 4.

In Mexico, regional disparities in terms of access to FDI have been present since the market opening in the late 1980s. In 1990, Mexico City, Nuevo León and Estado de México amounted for 77.7% of total FDI inflows – Mexico City alone received 59.8% of the total, whereas Oaxaca, Chiapas and Campeche combined received less than 0.1%.⁶⁶ In 2018, the total share of the top federal entities lowered, however, that can mostly be attributed to the diminishing of FDI inflows to Mexico City (in 2018 16%), but top 5 states still received 53% of overall foreign investment, whereas the bottom 5 received only 1.5% of FDI.⁶⁷ For a detailed breakdown see Map 7–10.

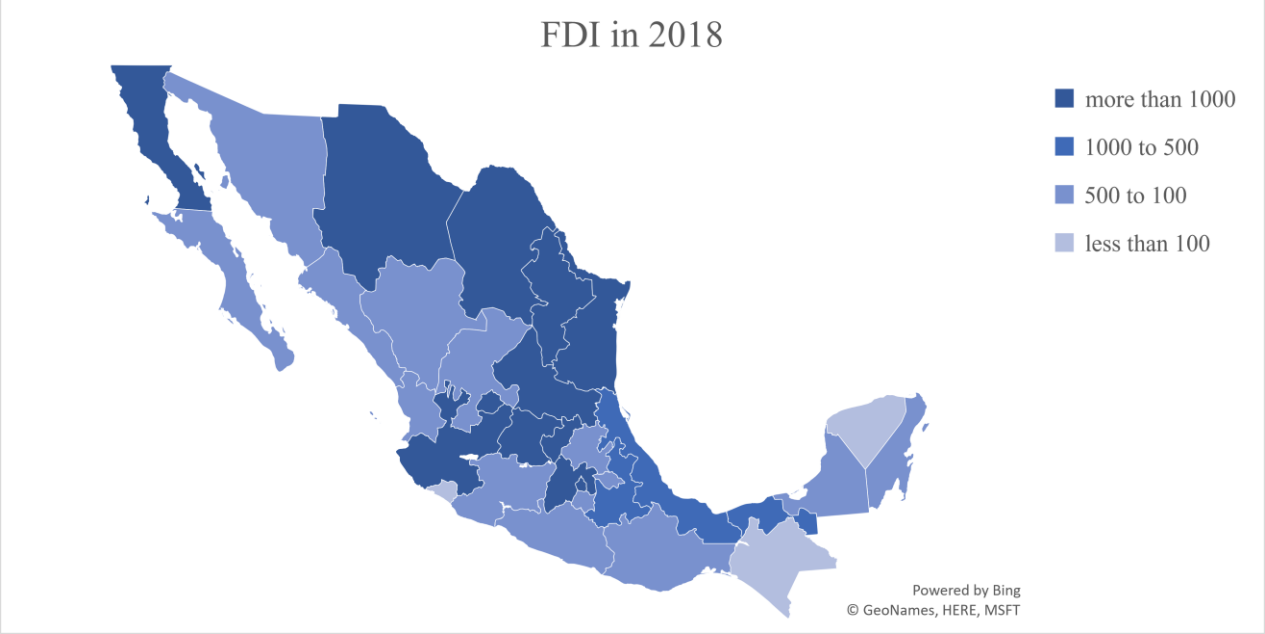
Map 7: FDI inflow in 1994 in millions of dollars



⁶⁶ Olvera, “Inversión Extranjera Directa en México”, 17.

⁶⁷ See Appendix, Table 3

Map 8: FDI inflow in 2018⁶⁸



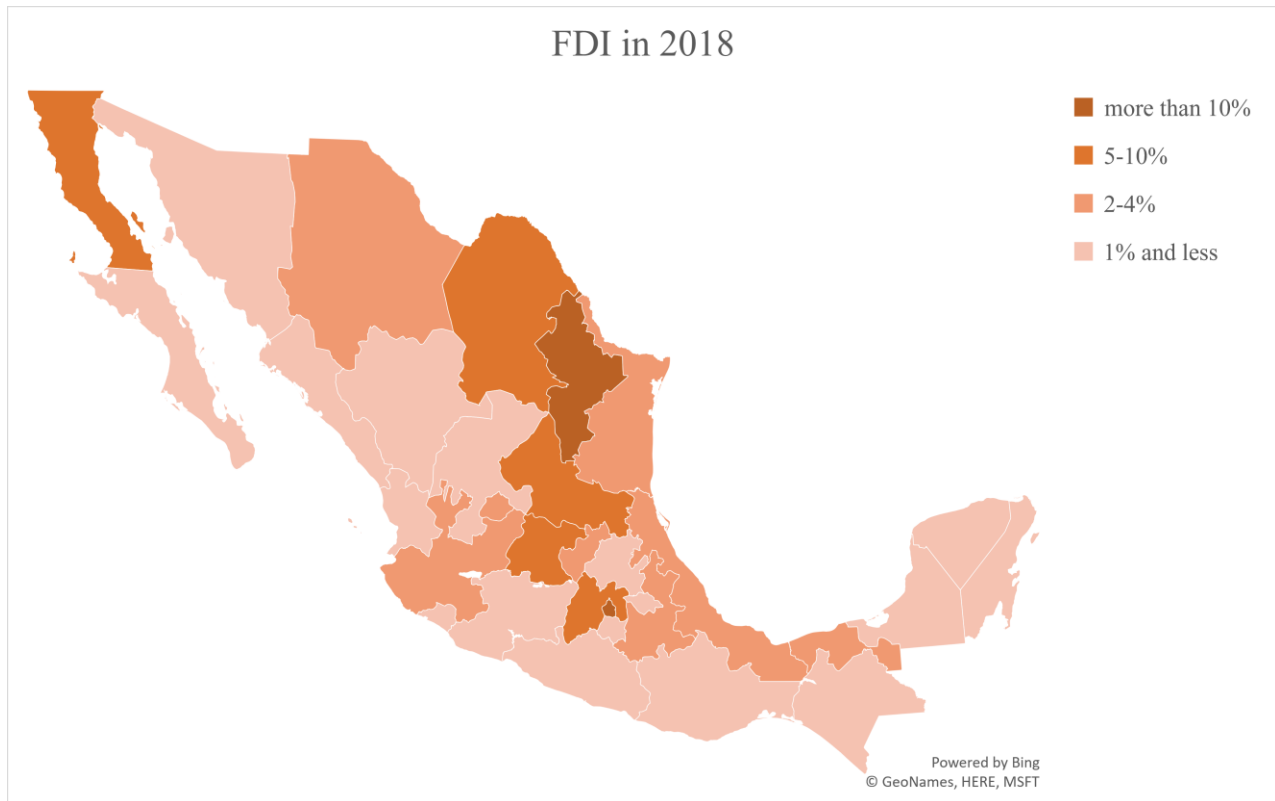
Map 9: Distribution of total FDI inflow in 2008 (in %)⁶⁹



⁶⁸ INEGI, For more detailed break down of FDI see Appendix, Table 3

⁶⁹ INEGI

Map 10: Distribution of total FDI inflow in 2018 (in %)⁷⁰



The Maps show FDI inflows starting from the period when USMCA (NAFTA) came into effect (1994) until 2018. We may notice two trends occurring in the Mexican regions. First, even though foreign investment grew in nearly all Mexican states, it remains significantly unequally distributed amongst the regions, and those inequalities generally do not change over time. Second, it seems that it is regionally concentrated, mostly in states bordering the US and the Centre, leaving out the South's states.⁷¹

According to data and the investigation by María Olvera, the investment inflow is also not based on greenfield investments. Instead of creation of new companies, most of the FDI goes to

⁷⁰ INEGI

⁷¹ INEGI:

ENADID (Encuesta Nacional de la Dinámica Demográfica 2018):

<https://www.inegi.org.mx/programas/enadid/2018/default.html#Microdatos>

Calculation based on GDP per state and population per state taken from data from INEGI

for some reason World Bank has different GDP per capita

<https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?end=2018&locations=MX&start=2008> but from what I

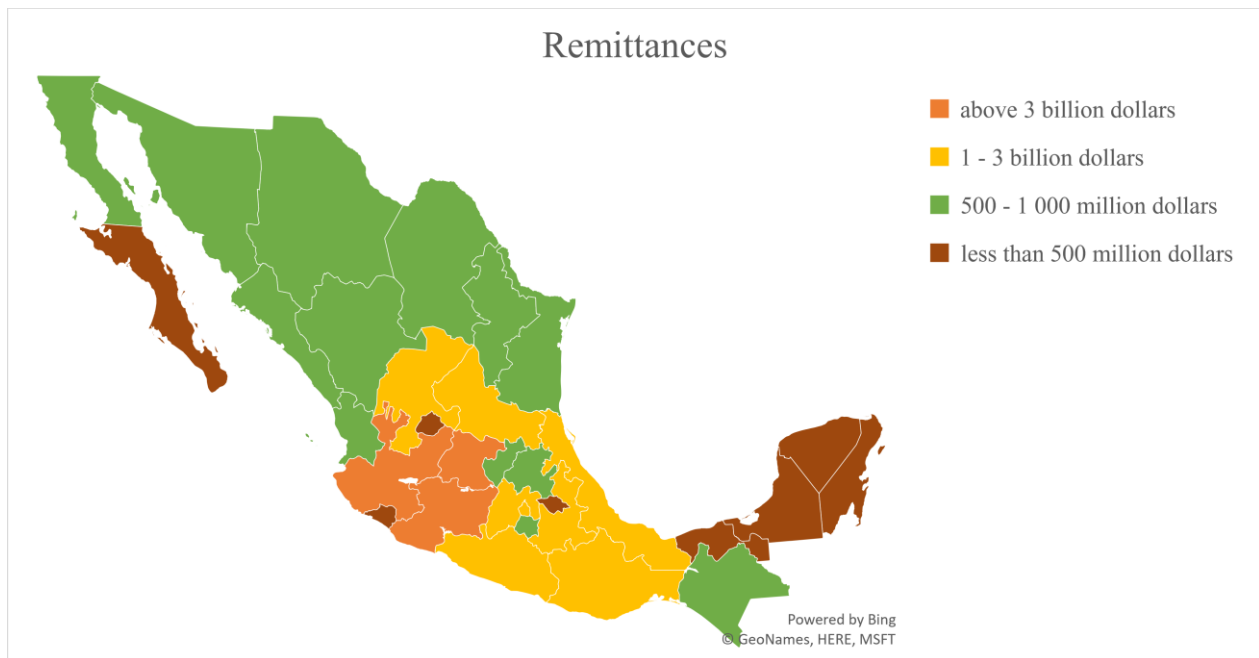
calculated based on data from INEGI census 2018 (population) and INEGI official statistics of GDP per state (based on prices of 2013) my outcome was different

acquisition or purchase of government-owned companies.⁷² Furthermore, Dussel Peters (2007) points out that FDI deepened regional differences in Mexico and worsened the division between North and South, especially when it came to Research and Development in the technology – manufacturing industry in particular.⁷³

3.1.3 Remittances

Another possible external source of income are remittances coming from families abroad. As mentioned above, remittances are important source of income and can play a significant role in the development of a region (they are the second biggest income source for Mexico). For the year 2018, remittances amounted to about 33.7 billion dollars, which is slightly higher than inflow of FDI (33.6 billion). It is, therefore, important to account for this significant amount of income as it does not flow solely into regions with higher economic activity as FDI tends to.

Map 11: Inflow of Remittances per Federal Entity⁷⁴



They play a significant role in the reduction of poverty in the recipient regions as well as play, to some extent, a role as an investment and contribute to economic development. *They allow poor recipient households to increase their savings, spend more on consumer durables and human*

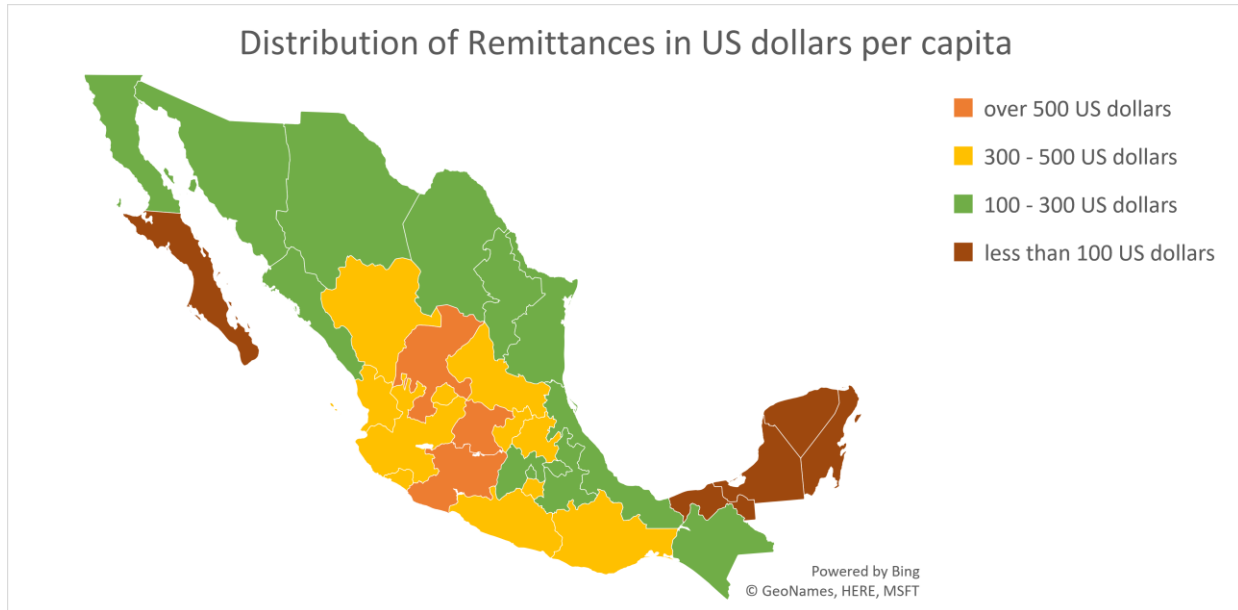
⁷² Olvera, “Inversión Extranjera Directa en México”, 13.

⁷³ OCDE, *Estudios de la OCDE de Innovación Regional*, 86.

⁷⁴ Banco de México, 2018

capital, and improve children's health and educational outcomes.⁷⁵ However, even though they have a positive impact on development, their magnitude tends to be modest.⁷⁶

Map 12: Distribution of Remittances in US dollars per capita⁷⁷



Map 11 and Map 12 show that distribution of remittances is concentrated in the Centre and the South. The three Southern federal entities receive up to 3 billion dollars in remittances, which is a significant amount comparable to the income of FDI of some the Northern states. That remains very similar even when divided per region's population. The federal entities receiving the least remittances per capita remain Baja California Sur and Yucatan Peninsula. This is one of the incomes that may help the regions with higher poverty and lower economic performance to develop, as it is an external incentive for growth and much needed source of income.

3.1.4 Export

According to Michael Porter and the theoretical approach of this thesis, export is key for region's development. It is, therefore, important to identify exporting trends of the regions and the nature of their exporting commodities. Adding on Hausman's complexity index theory, not all products are equal. Certain products, manufacturing ones especially, require high amounts of human capital and high sophistication. These products have a more significant impact on a region's economic

⁷⁵ Pablo Fajnzylber, ed. *Remittances and Development: Lessons from Latin America*, The World Bank (Washington, D. C. 2008): 2. <https://www.oecd.org/dev/americas/42716118.pdf>

⁷⁶ Fajnzylber, „*Remittances and Development*“, 3.

⁷⁷ Banco de México divided by population count INEGI

growth than less sophisticated products.⁷⁸ Maps 13 and 14 show where the regions with the most exports are located, Map 14 shows the federal entities' changes of export in a ten-year period (2008-2018).

Map 13: Export in 2008 per federal entity (in US dollars)⁷⁹



Map 14: Export in 2018 per federal entity (in US dollars)⁸⁰



⁷⁸ Mendoza, Segovia, González, „Análisis regional de sofisticación y centralidad de las exportaciones mexicanas“, 151.

⁷⁹ INEGI

⁸⁰ INEGI

Map 15: Export change in period 2008-2018 (in percent)

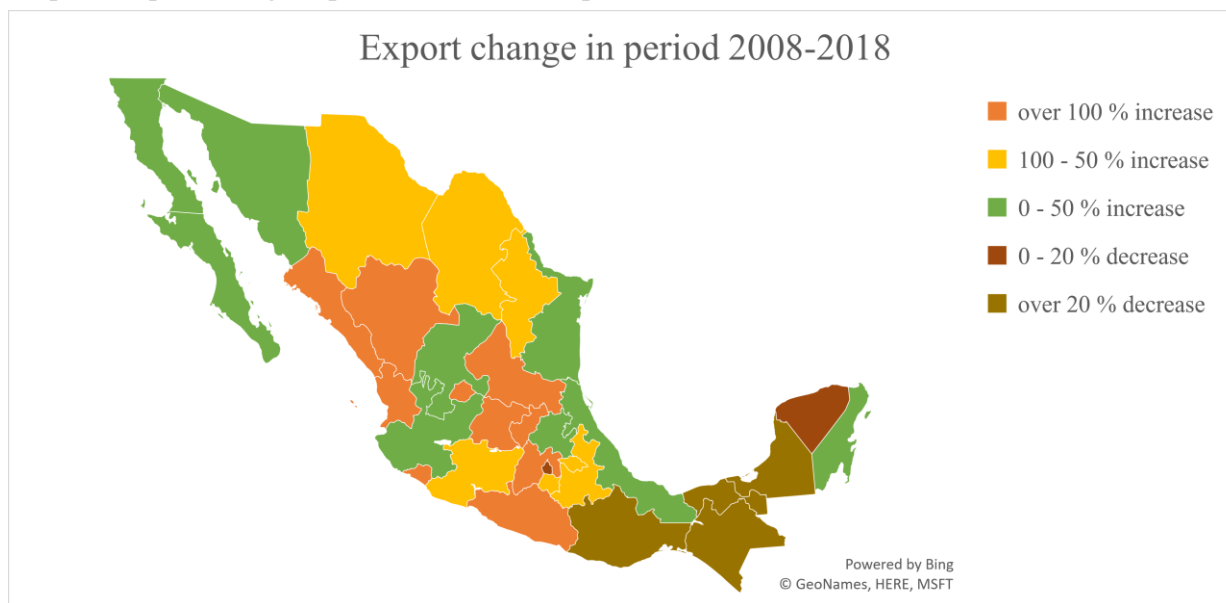


Table 3: Export overview of the three Mexican regions

Region	Export 2018 (USD)	% of total	export 2008 (USD)	% of total
North	222 168 187	57%	144 071 626	56%
Centre	136 688 808	35%	68 344 481	26%
South	28 585 804	7%	45 551 678	18%

Maps 13-15 and Table 2 show that exporting is concentrated in the North. The North exports over 50% of the national share even though it accounts for barely 24% of the total population. Nevertheless, the Centre is catching up, as its share of total exports increased from 26% to 35%. On the other hand, the South is exporting barely 7% of the total Mexican export, and its exports have decreased by 37% during the ten-year period 2008-2018. One of the reasons behind the decrease is lower export of oil (Campeche and Tabasco), but as we can see, except for Guerrero (182 % increase) and Quintana Roo (24 % increase) the exports have declined in all the southern federal entities.

Most Mexican exporting is based on the manufacturing industry. After the 1980s, Mexico experienced a high boost in exports because of the so-called maquiladora industry⁸¹. The

⁸¹ Definition: *A maquiladora (also known as a twin plant) is a manufacturing operation or factory in Mexico, usually near the U.S.-Mexico border, that operates under a favorable duty- or tariff-free basis. The administration facility of the parent company of a maquiladora is located in the United States.*

<https://www.investopedia.com/terms/m/maquiladora.asp>

maquiladora industry has been quite successful in generating income for Mexico, the North especially, however, it did not generate as much growth as was anticipated. There are two reasons behind that: first, these sorts of manufactured goods require a high quantity of imported goods; second, Mexico takes part in the low value added part of the product-production.⁸² Therefore, even though the Mexican exports are based mainly on manufactured goods (as will be further analysed in the Part III of this paper) and it is deeply intertwined with the United States, it does not benefit from the structure as much as it could be.

3.1.5 Companies

The theory of clusters stands, in great part, on the concentration of companies in one place. These concentrated companies then create clusters through their interactions with each other. For that purpose, we will briefly observe the distribution of companies across Mexico (see Map 16 and 17).

Map 16: Distribution of compnaies across Mexico⁸³



⁸² Gerardo Fujii, Eduardo Candaudap, Claudia Gaona, „Exportaciones, industria maquiladora y crecimiento económico en México a partir de la década de los noventa“, *Investgación económica* 64, no. 254 (october/december 2005) http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-16672005000400125

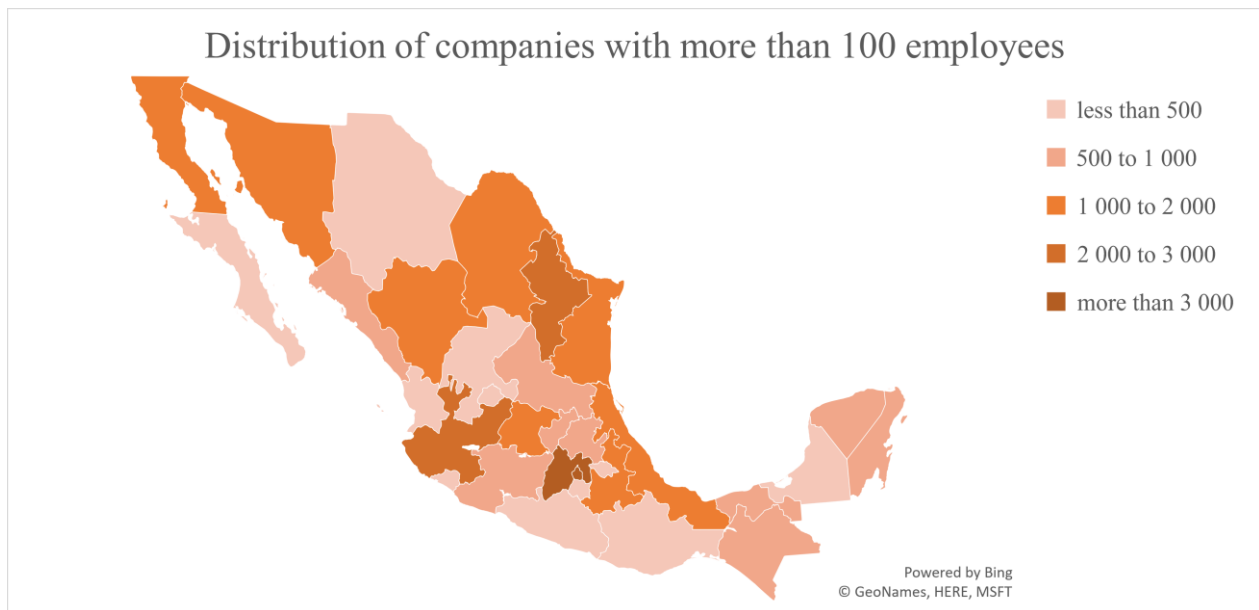
⁸³ INEGI

Map 17: Distribution of companies across Mexico per 1000 inhabitants⁸⁴



The data demonstrates that in terms of both the total number of companies as well as the concentration of companies per capita, the most companies are concentrated around Mexico City and in the Centre. However, there is a fair share of companies located in the South as well. The data shows that the South has a significant share of companies both in terms of the total count as well as in terms of companies per capita. That is something that the South can build on in the future.

Map 18: Distribution of companies with more than 100 employees⁸⁵



⁸⁴ INEGI

⁸⁵ INEGI

The Map 18, however, shows another reality of the distribution of the companies across the country. Even though the South has a significant number of companies, when it comes to bigger companies, those that employ more than 100 employees, it lags significantly behind the North and the Centre. That might also be one of the reasons it also lags in the inflow of FDI, as analysed before.

3.2 HUMAN CAPITAL

As mentioned in the previous section, according to the New Economic Geography, human capital is key for a region's development. Jesse Shapiro even finds evidence that human capital accounts for up to 60% of productivity growth.⁸⁶ It is, therefore, important to look at some aspects of human capital in Mexico.

3.2.1 Job Creation and Employment

In the case of job creation for formal employment, it is a problem common to all of Latin America. One of the issues of developing countries is a rapid increase in population which is related to rapid growth. Looking at the Mexican case, in 1970 Mexico had a population of 48 million inhabitants, which more than doubled to almost 125 million by 2018.⁸⁷ The country faced serious issues trying to keep up with such a rapid spike in its population, including job creation. This lack of a proper long-term strategy resulted in almost 50% of Mexico's active population working in the so-called "informal sector". Informal employment is a form of employment without any adequate social security nor guarantees to the employees.⁸⁸ Mexico has been experiencing yearly increases of new formal employment opportunities of around 4% which is higher than its annual growth of GDP (2%). Yet, a majority of the new jobs are concentrated in the Centre and the North regions (see Figure 4).

⁸⁶ Capello and Nijkamp *Handbook of Regional Growth and Development Theories*, 146.

⁸⁷ INEGI (<https://www.inegi.org.mx/programas/ccpv/1970/default.html#Tabulados>)

⁸⁸ OECD official guidelines refer to informal sector or informal economy as:

"The concept of "informality" was first introduced in the 1970s ... "informal economy" as referring to all economic activities by workers and economic units that are – in law or in practice – not covered or insufficiently covered by formal arrangements. The informal economy does not cover illicit activities."

https://www.oecd-ilibrary.org/development/tackling-vulnerability-in-the-informal-economy_103bf23e-en

Figure 4: Formal Job Creation per Region (count)⁸⁹

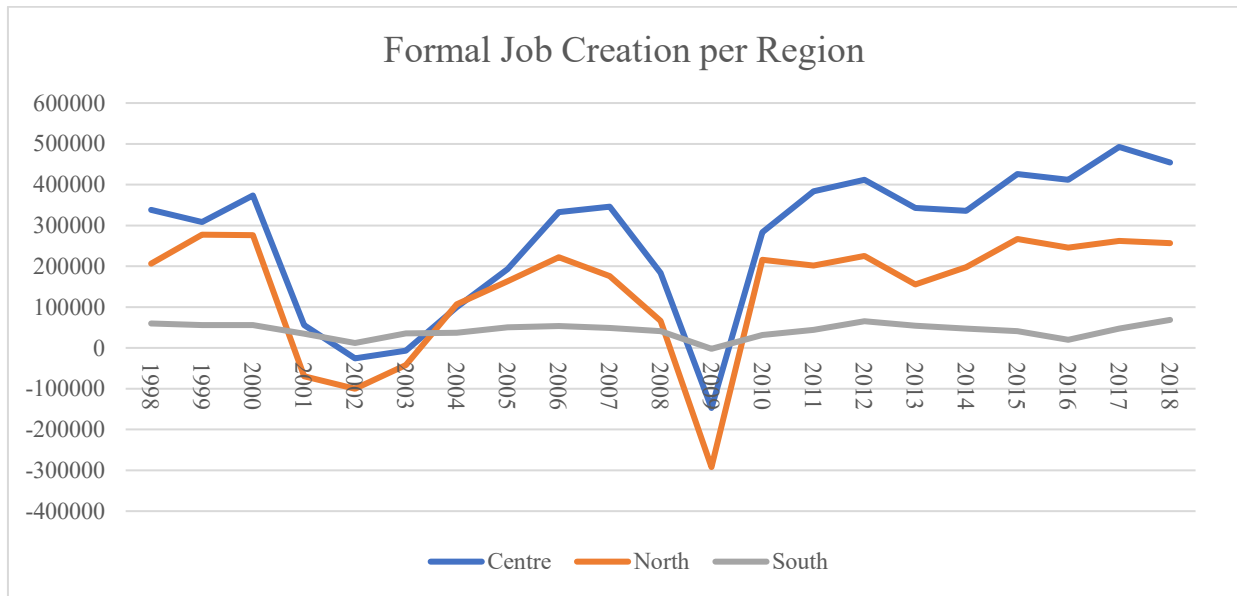
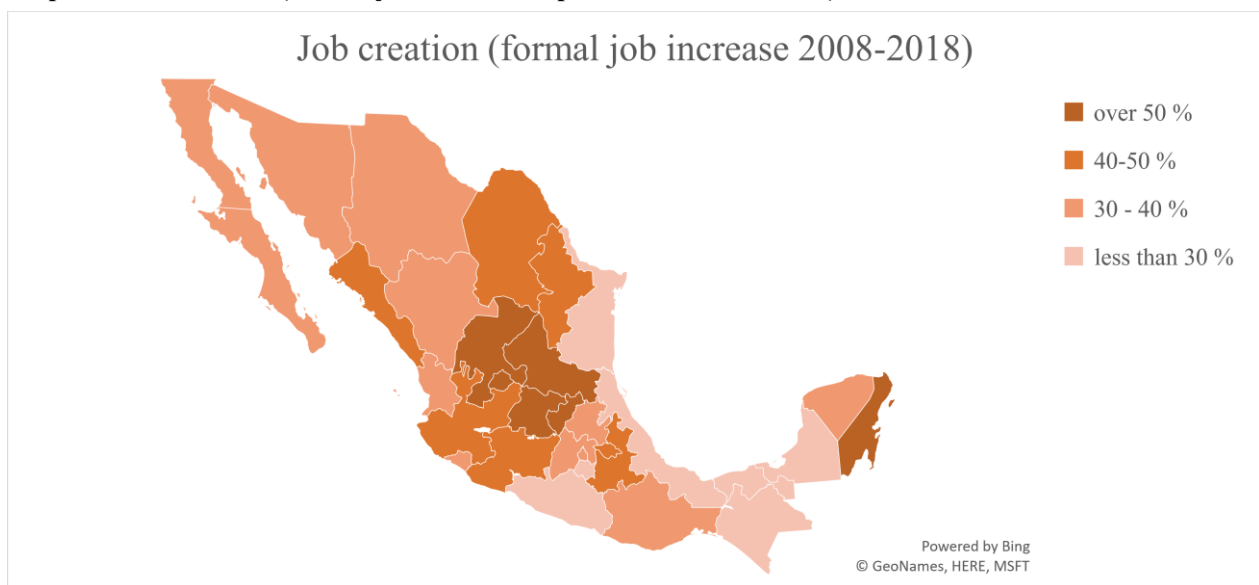


Figure 4 shows that in the case of new job creation, the North and the Centre are the two regions with the most new jobs created. The data also suggests that these new jobs are to some extent connected to the exporting sector as they were impacted during the two economic recessions Mexico experienced, whereas the South did not experience any change. A further breakdown of federal entities can be seen in the following Map (Map 19).

Map 19: Job Creation (formal job increase in period 2008-2018 in %)⁹⁰



⁸⁹ Instituto Mexicano del Seguro Social (IMSS)

⁹⁰ IMSS

Map 19 shows that the most successful areas in terms of job creation are federal entities in the Centre, North's border states with the US and Yucatan and Quintana Roo (both can be attributed to their rapid economic growth due to their successful orientation to tourism). Over time, Quintana Roo (the South) is the state where formal employment grows at the fastest rate, followed by Querétaro and Aguascalientes, both part of the Centre. In total numbers, it is Mexico City, closely followed by Estado de México and Jalisco, all three are part of the Centre region; fourth being Nuevo León, followed by Guanajuato and Quintana Roo in sixth place. On the other side of the scale is Campeche and Tabasco, both oil-dependent states experiencing serious downfalls in recent years.

This may indicate that even though most of new formal economic activity is created in the Centre and the North, the South has been able to participate in this growth as well. Yucatán Peninsula has been able to make use of its tourism potential and, concerning formal job creation, it is one of the fastest growing states in Mexico. The rest of the southern states, however, face serious challenges in the creation of new jobs for their citizens. Data in Table 4 and Figure 4 indicate that the South is not only growing at the slowest pace in the total count of jobs created, but it does not mirror any financial crisis that took place within the period 1998-2018. This shows that the South is not dependent on external factors, indicating that the region does not have any significant exporting commodity that would generate growth, and would lead to job creation.

The following table (Table 4) demonstrates the overall statistics of employment, unemployment and rate of informality in each federal entity of Mexico for the year 2018.

Table 4: Employment

Federal Entity	Region	Working Population	Unemployment Rate	Formal employment per IMSS	Formal employment per IMSS %	Rate of Labour Informality (TIL 1) ⁹¹
Baja California	North	1 702 808	2.2%	871 826	51%	39%

⁹¹ As it is difficult to measure informality, TIL 1 (Tasa de Informalidad Laboral) is one of 4 possible measurements of informality in Mexico (TOSI 1/2 and TIL 1/2), compared to TOSI it includes all workers that are self-employed or employed but without any basic protection nor social security and compared to TIL 2 it includes occupation in agriculture, it is calculated as follows

$$Tasa\ de\ Informalidad\ Laboral\ 1\ (TIL) = \left(\frac{\text{informal employment}}{\text{total employment}} \right) \times 100$$

$$Tasa\ de\ Ocupación\ en\ el\ Sector\ Informal\ 1\ (TOSI) = \left(\frac{\text{employed in informal sector}}{\text{total employment}} \right) \times 100$$

See: La informalidad laboral. *Encuesta Nacional de Ocupación y Empleo*,. 26

Both of the indexes show the same trend, so it does not matter that much which one is used, hence the first one.

Baja California Sur	North	409 984	3.7%	179 673	44%	37%
Coahuila	North	1 341 233	3.6%	779 207	58%	35%
Chihuahua	North	1 733 590	2.2%	881 515	51%	38%
Durango	North	771 803	4.1%	245 516	32%	52%
Nuevo León	North	2 420 543	3.5%	1 606 329	66%	37%
Sinaloa	North	1 346 510	3.1%	541 591	40%	52%
Sonora	North	1 411 604	3.6%	612 534	43%	44%
Tamaulipas	North	1 632 724	3.8%	670 089	41%	45%
Zacatecas	North	644 993	2.4%	183 796	28%	62%
Aguascalientes	Centre	565 560	3.2%	317 821	56%	42%
Colima	Centre	382 222	3.7%	133 116	35%	51%
Mexico City	Centre	4 212 542	5.1%	3 416 784	81%	49%
Guanajuato	Centre	2 557 936	3.8%	983 767	38%	53%
Hidalgo	Centre	1 275 340	2.1%	229 389	18%	76%
Jalisco	Centre	3 700 487	2.5%	1 757 571	47%	49%
México	Centre	7 619 554	3.8%	1 609 634	21%	57%
Michoacán	Centre	1 964 674	2.5%	441 736	22%	69%
Morelos	Centre	820 724	2.1%	209 503	26%	69%
Nayarit	Centre	598 738	3.6%	139 681	23%	63%
Puebla	Centre	2 777 999	2.5%	615 783	22%	73%
Querétaro	Centre	829 255	3.7%	573 518	69%	42%
San Luis Potosí	Centre	1 195 177	2.1%	438 161	37%	56%
Tlaxcala	Centre	579 067	4.0%	99 449	17%	73%
Veracruz	Centre	3 238 909	2.7%	740 542	23%	68%
Campeche	South	418 566	3.5%	123 204	29%	62%
Chiapas	South	1 899 923	3.5%	223 727	12%	78%
Guerrero	South	1 540 739	1.2%	160 675	10%	79%
Oaxaca	South	1 731 946	2.0%	214 305	12%	81%
Quintana Roo	South	846 060	3.1%	448 276	53%	48%
Tabasco	South	939 285	7.9%	167 005	18%	66%
Yucatán	South	1 084 113	1.5%	366 903	34%	62%
Total		54 194 608	N/A	19 982 627	37%	57%

Statistics from INEGI, IMSS⁹²

Data from Table 4 shows various tendencies occurring in Mexican regions. Overall, the Centre has the highest number of working population (32.3 million), followed by the North (13.4 million) and

⁹² IMSS: http://siel.stps.gob.mx:303/ibmcognos/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.action=run&ui.object=XSSSTART*2fcontent*2ffolder*5b*40name*3d*27Sitio*20STPS*27*5d*2ffolder*5b*40name*3d*271.*20Asegurados*20en*20el*20IMSS*27*5d*2freport*5b*40name*3d*27Trabajadores*20Asegurados*20al*20IMSS*20por*20Entidad*20Federativa*27*5dXSEND&ui.name=XSSSTARTTrabajadores*20Asegurados*20al*20IMSS*20por*20Entidad*20FederativaXSEND&run.outputFormat=&run.prompt=true

lastly the South (8.4 million), which roughly correlates with the population density of each region. In terms of unemployment, there are differences between each states', but generally, there is not a significant difference between these three regions, all of them having an average unemployment rate between 3.0 to 3.5 percent (there are some spikes, such as Tabasco, with an unemployment rate of 7.9%, or Guerrero and Yucatán having unemployment lower than 2%).

There are, however, significant differences in the ratio of formal to informal employment in the regions. The highest formal versus informal employment ratio is, in fact, in the North. In the North the formal employment reaches up to 49.0% of its total employment, whereas in the Centre it reaches 36.2% and the South lags behind with 20.1% of its total employment being formal. In the North, it is mostly the border states that are having the highest share of formal employment. In the Centre, Mexico City has shown a different trend. The city has a relatively high rate of formal employment (81%), but the surrounding state of Estado de México has a very low rate of formal employment (21%). That shows another negative externality of Mexico City which attracts workers employed in the informal sector but pushing them out to its periphery. Overall, the South has the worst formal/informal sector ratio. With the exceptions of Yucatán and Quintana Roo, none of the federative entities of the South reaches 30% in formal employment.

The informal economy poses a significant challenge for the regions as well as for the whole of Mexico. Informal employment is usually defined by "*the absence of social protection or non-payment of social contribution or the absence of written contract.*"⁹³ Workers often receive higher income when working in informal jobs.⁹⁴ In addition, if they avoid formal economy, they do not pay taxes, thus generating more personal income. Nonetheless, taxes play the role of needed investment that could be used for the improvement of human capital, increasing productivity and reduction of poverty. Additionally, not paying social security and tax avoidance has significant disadvantages, as these workers will not obtain loans which they may use for the starting of their own business. This results in them having to risk their personal property for their projects. Furthermore, they will not be able to obtain governmental support for those projects either. This limits investment and expansion as well as innovation and slows down potential growth.⁹⁵ There

⁹³ Jacques Cahmes, „The informal economy: Definitions, Size, Contribution, Characteristics and Trends“, *Research Network and Support Facility*, EuropeAid, Rome 2016: 9.

⁹⁴ OCDE, *Estudios de la OCDE de Innovación Regional*, 89.

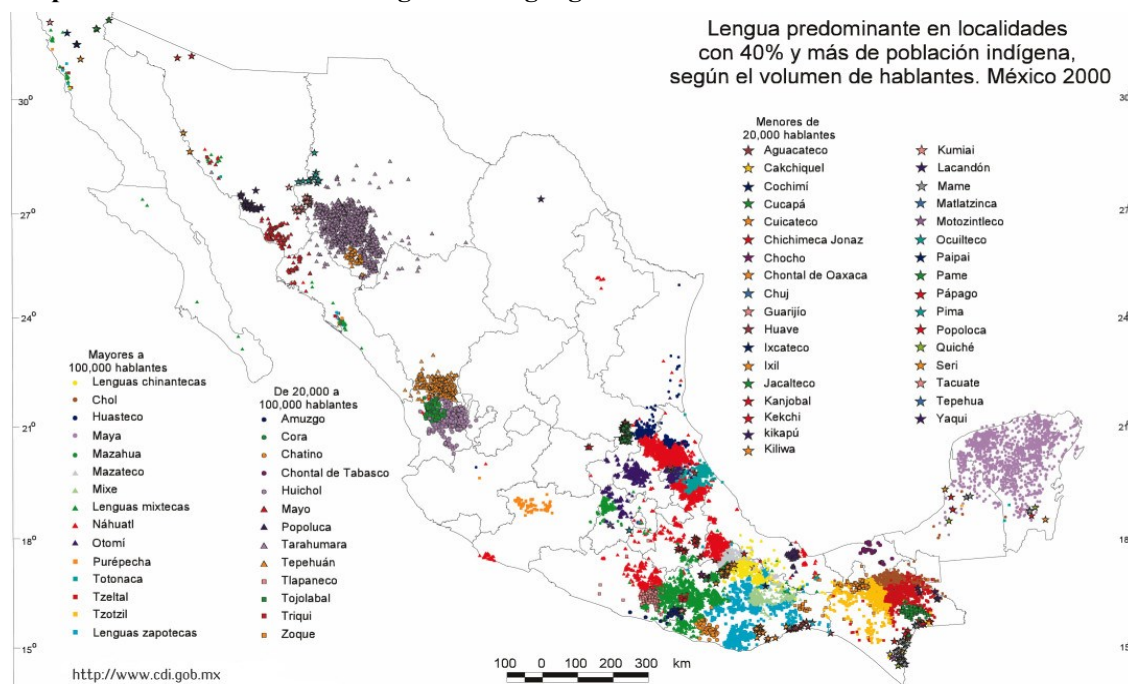
⁹⁵ Ibid.

are various solutions that might help to resolve this viscous circle. One of them is providing incentives for participation in the formal sector – pensions, higher quality and efficiency of services of social security, simplifying rules and making legislation more business friendly, and in general improving the business environment.⁹⁶

3.2.2 Education

Education is one of the key elements in the creation of a qualified labour force. Mexico has made significant progress in recent years. Thanks to various governmental programs targeting illiteracy, the majority of children attain an education. It has also achieved significant improvements in secondary and tertiary education (it increased its tertiary education attainment from 16% in 2008 to 23% in 2018).⁹⁷ There are, however, various obstacles and disparities in the length of education as well as the quality across the regions. One of the reasons is that in Mexico, apart from Spanish, there are an additional 68 indigenous languages with various dialects. These languages are also regionally rooted (see Map 20).

Map 20: Location of official indigenous languages in Mexico⁹⁸



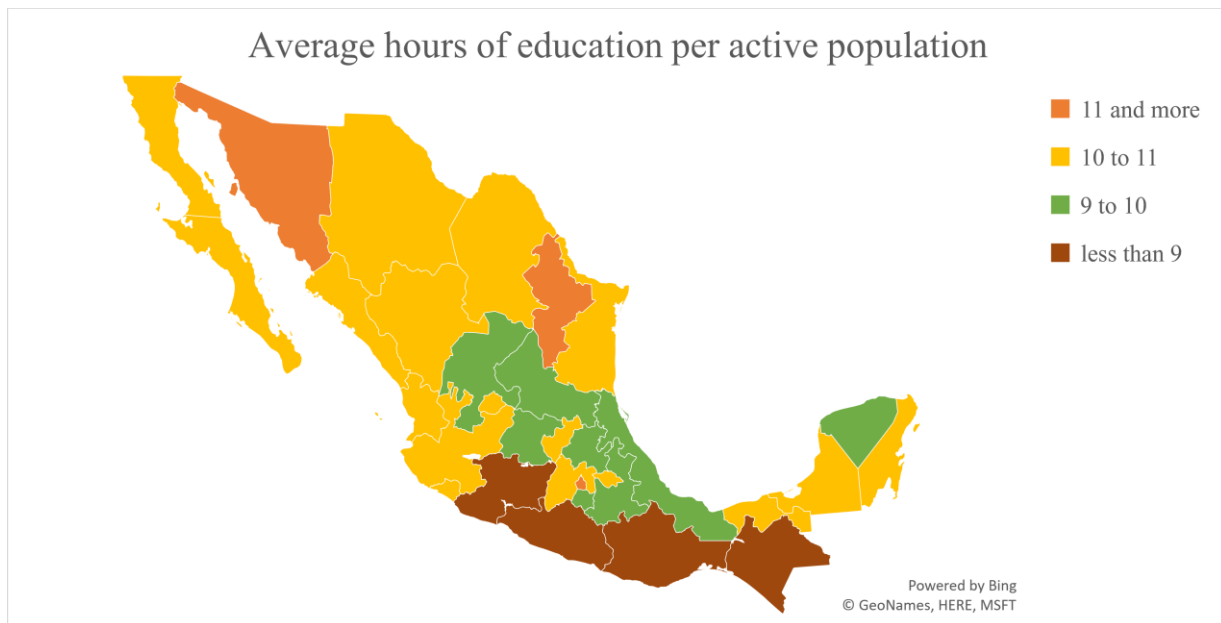
⁹⁶ Ibid, 90.

⁹⁷ OECD, *Education at a Glance 2019*, OECD https://www.oecd.org/education/education-at-a-glance/EAG2019_CN_MEX.pdf

⁹⁸ Map taken from „Distribución geográfica de las 68 Lenguas Indígenas de México, *Delicias Prehispánicas*, (November 13, 2016): <https://deliciasprehispanicas.com/2016/11/13/distribucion-geografica-de-las-68-lenguas-indigenas-de-mexico/>

Map 20 shows that a substantial majority of the indigenous languages have various centres all around Mexico, but most of these languages are located in the Centre and the South. In some rural parts of Mexico, Oaxaca and Chiapas especially, there are communities that do not speak Spanish. This language barrier significantly hinders the promotion of education and integration of these regions into the rest of the country. Businesses may choose to move their production to a different part of the country due to this obstacle.

Map 21: Average years of education per active population



Even with language differences out of question, another important indicator for human capital is the average length of education per active population. As other research indicates⁹⁹, companies tend to move their production to places with an educated labour force, and higher education also promotes more technological development and research. As the following Map shows (Map 21), length of education, regardless of its quality, is also regionally concentrated. Apart from Mexico City, which, as the capital concentrates the most universities, two other states have over 11 years of education per citizen on average, Nuevo León and Sonora. It is also worth noting that apart from Zacatecas, the North is scaling the best in terms of length of education per population. The South, on the other hand, is scaling the worst, Guerrero, Chiapas and Oaxaca averaging less than 9 years of education per active population. It is necessary to point out, however, that those states have very

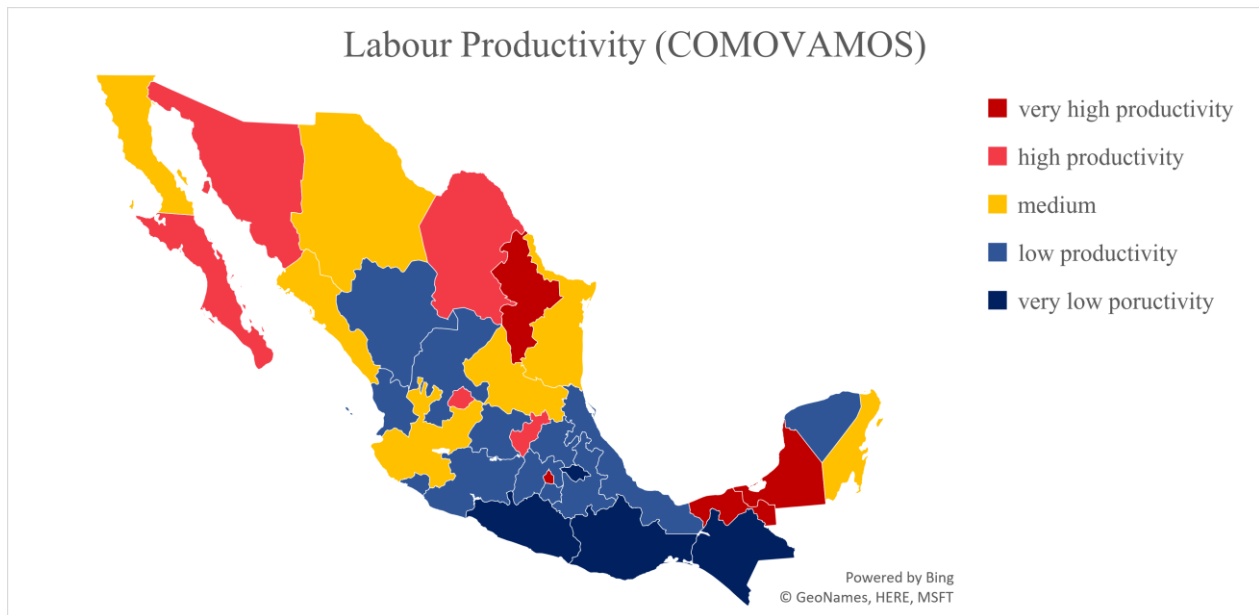
⁹⁹ Capello and Nijkamp, *Handbook of Regional Growth and Development Theories*, 133–137.

high emigration. The low average of education therefore does not necessarily mean that these states lack in education but might only show side effects of “brain drain”.¹⁰⁰

3.2.3 Labour Productivity and Salaries

There is another indicator of human capital which is closely connected to education, labour productivity. The Mexican agency COMOVAMOS is collecting yearly statistics of this index. The labour productivity index is measured calculating GDP per hours worked in each federative entity.¹⁰¹ According data from COMOVAMOS (see Map 22), labour productivity in Mexico goes along the same lines as education per hour. Mexico City has the highest labour productivity, however, areas around Mexico City are having low labour productivity. The North has the best performance with a majority of its states surpassing the national average. The South is very divided, both Campeche and Tabasco have very high productivity, Quintana Roo medium, whereas the southern three states have the lowest productivity.

Map 22: Labour Productivity Index¹⁰²

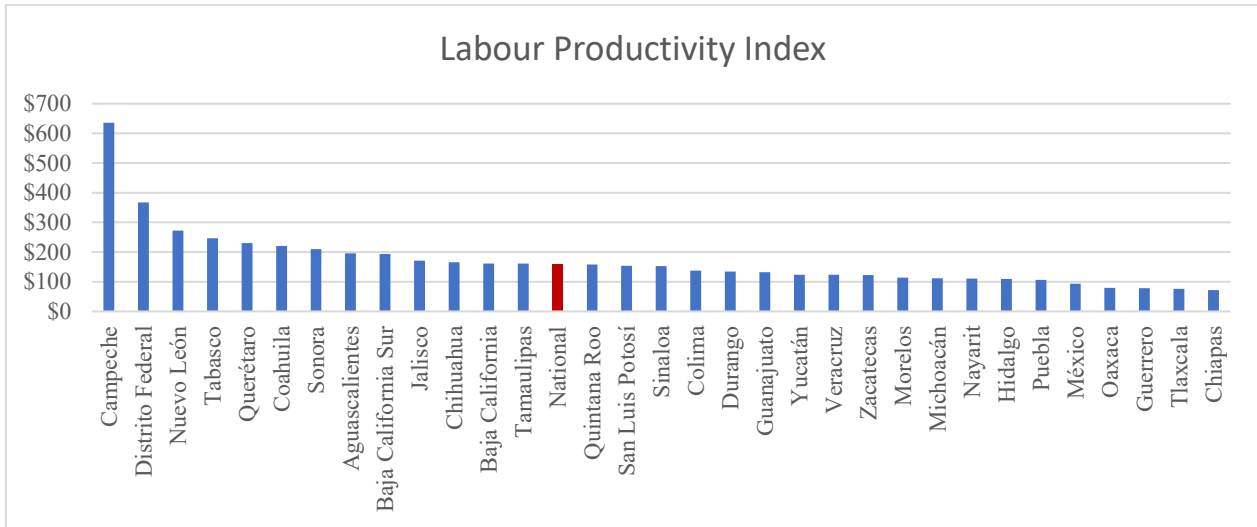


¹⁰⁰ Ibid, 137–140.

¹⁰¹ Productividad, *COMOVAMOS*, August 2015, 2. http://www.mexicocomovamos.mx/wp-content/uploads/2015/10/MCV_Estudio_Productividad.pdf

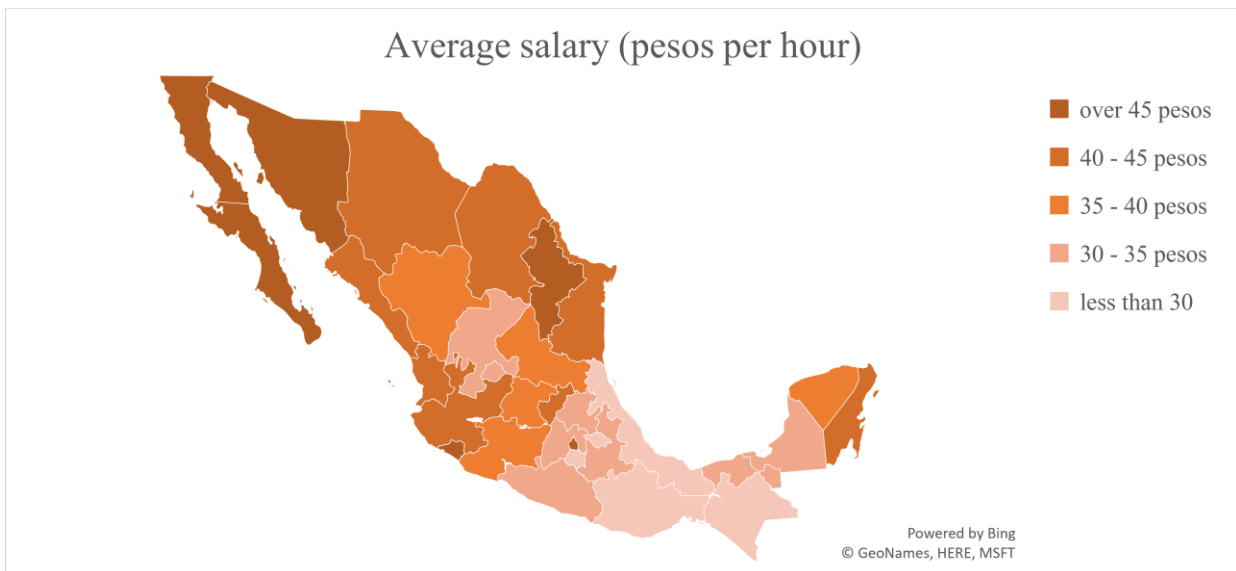
¹⁰² scale according to COMOVAMOS

Figure 5: Labour Productivity Index in pesos¹⁰³



The last statistics related to education and labour productivity is the price of labour – salaries. Since they are as deeply interconnected as previously mentioned, the data (Map 23) also closely correlates with the levels of education and labour productivity in each region. This, however, may be a significant comparative advantage for the South, as it can base its economic growth on relatively cheap labour compared to the rest of Mexico.

Map 23: Average salary (pesos per hour)¹⁰⁴



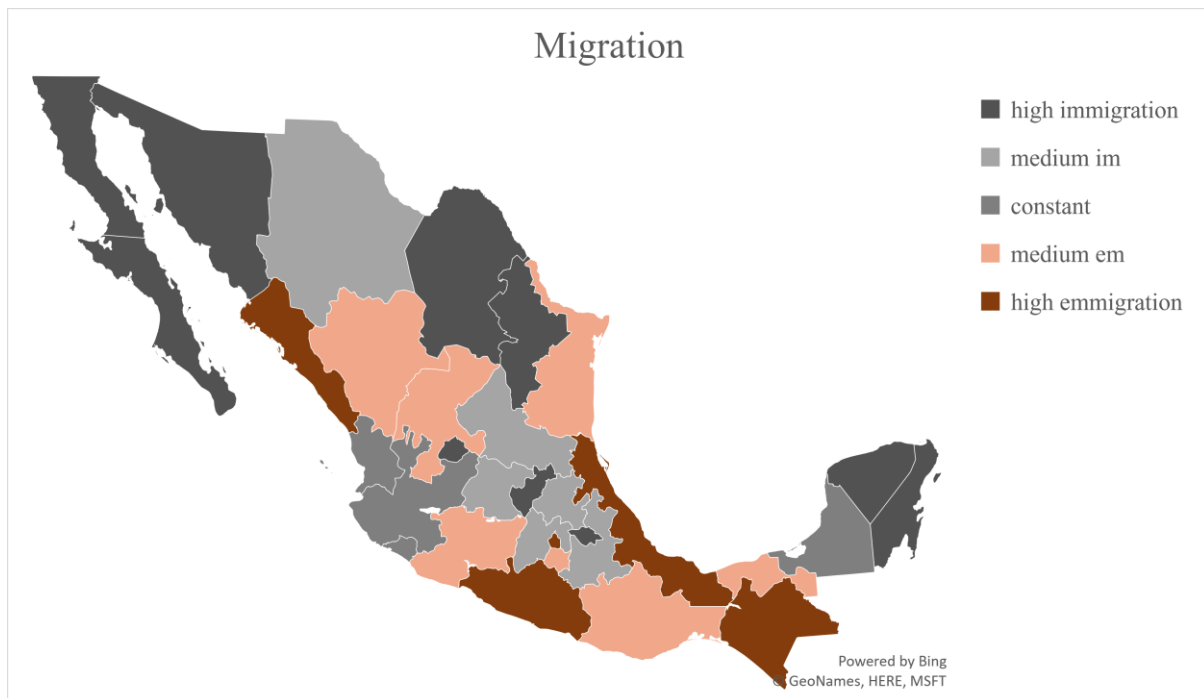
¹⁰³ COMOVAMOS

¹⁰⁴ There is a significant difference in its amount based on the formal and informal employment IMSS (Instituto Mexicano de Seguro Social) x INEGI, for instance Quintana Roo from 11th highest (INEGI) to 31st (IMSS) – difference in salaries according to formal x informal employment

3.2.4 Migration

Migration can play a significant role in a region's development. The influx of people offers a bigger pool of potential employees that companies can choose from to employ, therefore offers additional incentive for the companies to be located in a region. Furthermore, the workers migrate to places where they are more likely find a job, therefore migrating to a location with high economic activity. These two forces are thus reinforcing each other, generating further growth of a region. According to human capital migration theory, it is the more educated people who are, for various reasons, more likely to migrate from one region to another – they have better access to information, are less psychologically connected to one region etc.¹⁰⁵ This, however, leads to brain drain in the regions experiencing emigration. The following Figures (Map 24, Figure 6-7) show the situation in Mexico.

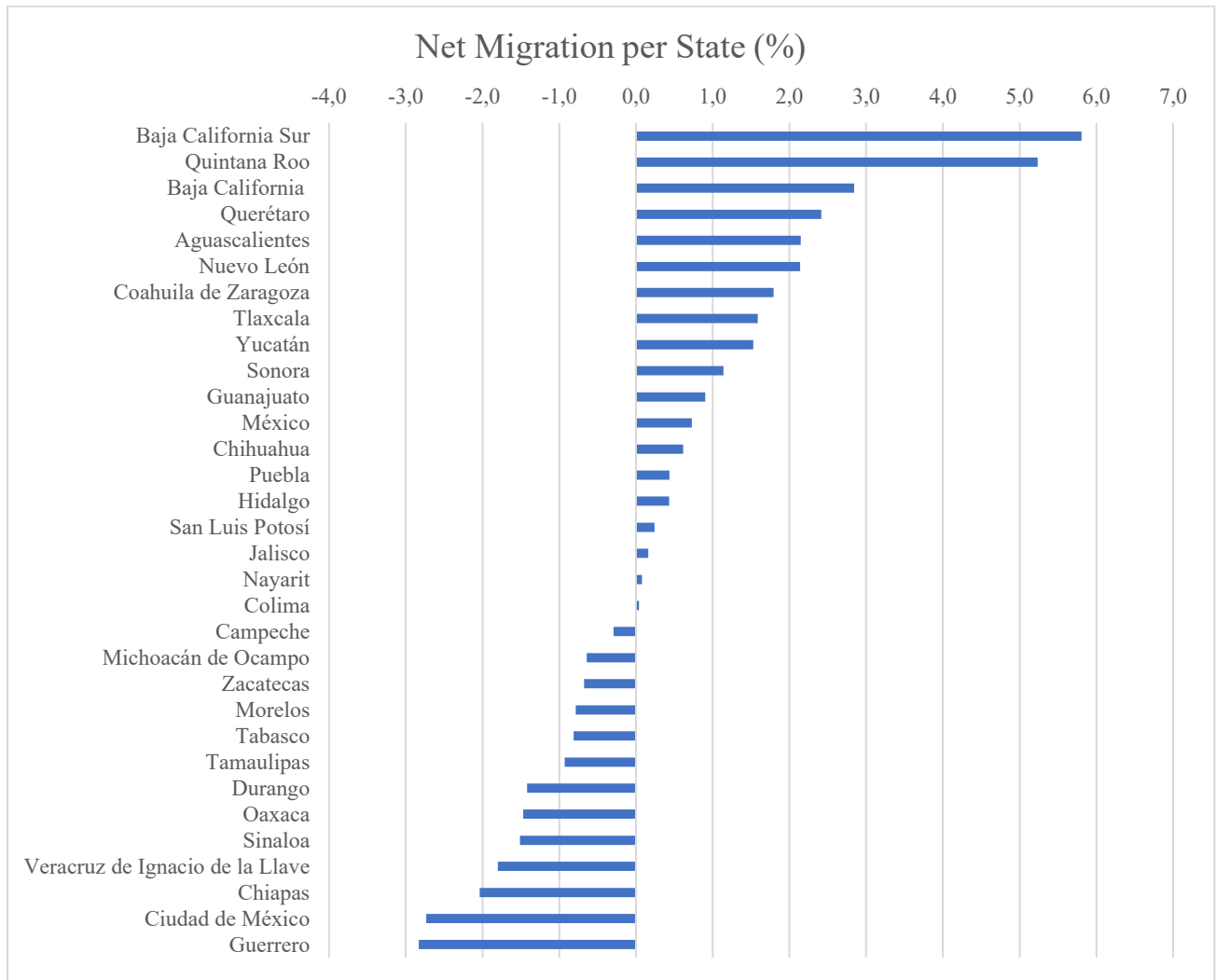
Map 24: Migration in Mexico¹⁰⁶



¹⁰⁵ Capello and Nijkamp *Handbook of Regional Growth and Development Theories* 137–140

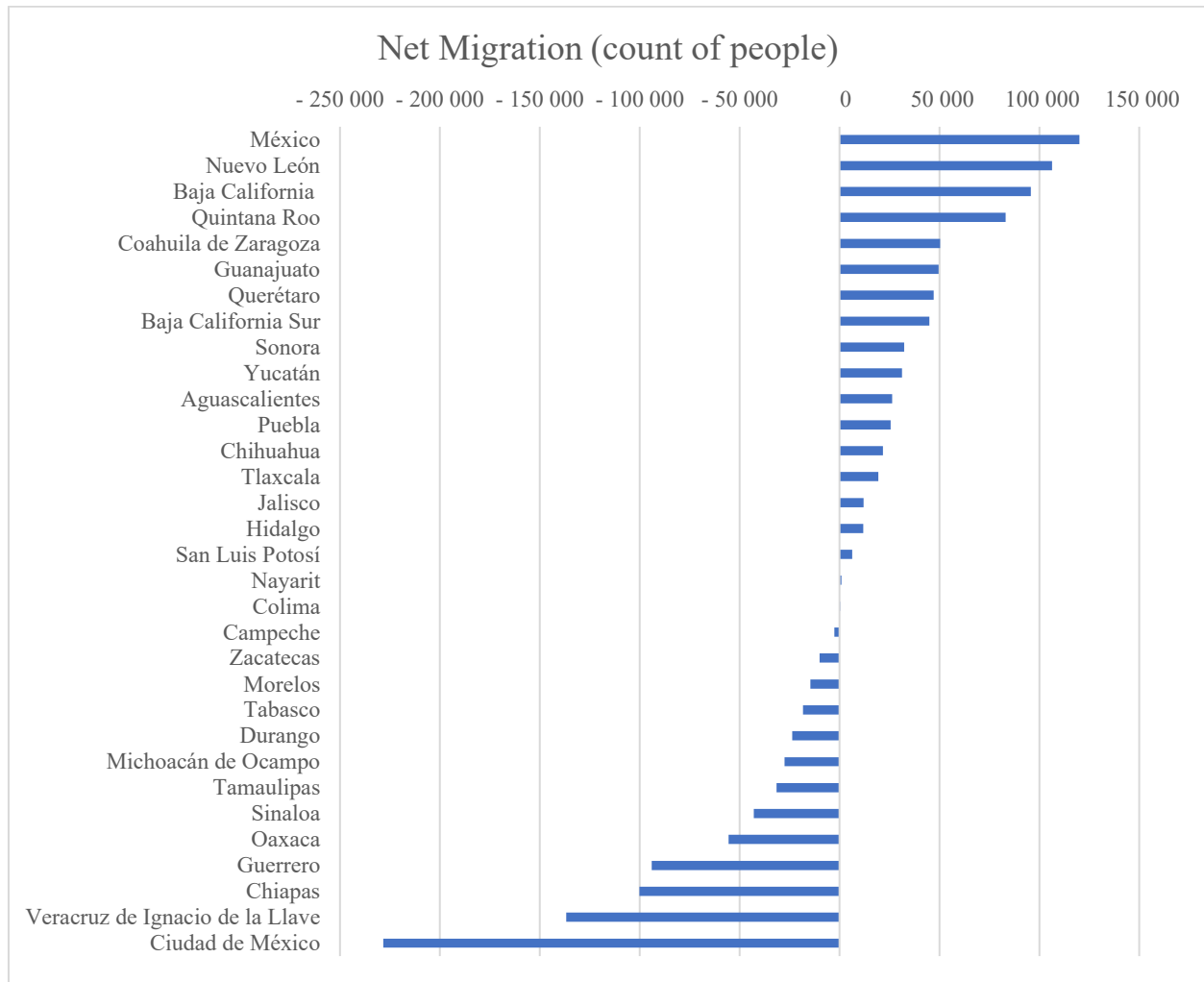
¹⁰⁶ INEGI

Figure 6: Migration per state (in %)¹⁰⁷



¹⁰⁷ INEGI

Figure 7: Net Migration per federal entity (count of people)¹⁰⁸



As the Figures 6-7 and Map 24 show, in the South, the states with lower GDP per capita experience emigration and the North and other federative entities with relatively high GDP per capita experience immigration. Except for Mexico City which has one of the highest emigrations, which is connected to it having many negative externalities (pollution, overpopulation, congestion, etc.)

3.3 INNOVATION, RESEARCH AND TECHNOLOGY

The following sub-chapter will very briefly evaluate regional concentrations of innovation, research and technology in Mexico. The vast majority of regional development theory approaches¹⁰⁹ agree that Research and Development (R&D) plays a crucial role in cluster-creation as well as long growth and development. It is, however, challenging to measure. This paper will

¹⁰⁸ INEGI

¹⁰⁹ Capello and Nijkamp *Handbook of Regional Growth and Development Theories*, 201–277.

use an analysis of patent-creation in Mexico (data base from 2016, as these are the most recent accessible).

Research and technology in Mexico tends to be highly concentrated. This can be demonstrated by the creation of new patents, as 58% of patents are concentrated in 10% of regions.¹¹⁰ Most of the technological research is concentrated in the Centre, and to some extent in the North as well. Mexico City scores the highest (with 97.1 patents per million inhabitants) followed by Nuevo León (with 95.8 patents per million inhabitants) – its capital Monterrey is the industrial capital as well as the second richest city of Mexico. Other federal entities that have some research and development are Jalisco (68.6 patents per million inhabitants), Querétaro (53.9), Aguascalientes and Guanajuato (41.9 and 41.3 respectively).¹¹¹ Technological centres known are Mexico City, Cuernavaca, Guadalajara and Monterrey.¹¹²

This shows that even though the North of Mexico is concentrating GDP and the exports of the country, it is to some extent omitted from the research. Technological development of the North's products is located in the United States, and the role of the North is less based on technological development and further sophistication of products (with exception of Nuevo León) and more on assembling of final products.¹¹³ Even though it generates income, it is less profitable as it does not add much added value to the products and is based more on Mexican cheap labour, thus making it more difficult to increase salaries.

3.4 FEDERAL GOVERNMENTAL APPROACH

The last important actor in the development of Mexican regions is the federal government and its role in the redistribution of income between the regions. Programs of redistribution by the government may help the lacking regions to develop and provide resources for infrastructure projects and development of needed human capital – all crucial for increasing development. That is especially important for the regions that are left behind as they find it more difficult to find resources for financing its development projects.

¹¹⁰ OCDE, *Estudios de la OCDE de Innovación Regional*, 26.

¹¹¹ CONAPO, data dated 2016

¹¹² OCDE, *Estudios de la OCDE de Innovación Regional*, 85.

¹¹³ Juan Óscar Ollivier Fierro, „Proveeduría nacional a la industria maquiladora en México. Un reto tecnológico“, *Frontera norte* 19, no. 38 (July-December 2007): 200.

http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0187-73722007000200007&lng=es&nrm=iso

The Mexican government has approached the issue of regional development with programs of the redistribution of public finances. Almost all revenues from each of the federal entities are collected by the federal government and redistributed.¹¹⁴ Therefore, over 80% of the income (and the spending) of each federal entity comes from the federal government. The two most significant financing programs, as they have the highest budget, are Ramo 28 and Ramo 33. Financing coming from Ramo 28 (Participation to federal entities and municipals) can be used in any way the local governments see fit. The amount for each federal entity is determined by: *i) its participation during this execution; ii) its growth of GDP iii) its enforcement of collection of the money iv) its population.*¹¹⁵ Ramo 33 (Appropriations to federal entities) has objectives: education, health, educational and social infrastructure and public safety. Its distribution is more complicated, and the outline is written in a special law (Ley de Coordinación Fiscal)¹¹⁶. Moreover, the federal entity does not have any power over where the finances will be used.

Each federal entity receives over 70% of its income through Ramo 28 and Ramo 33. The distribution of these, however, differs in each region (see Table 5). We can see that the South receives over 55% of its income through Ramo 33, over which it has no power. On the other hand, the Centre is able to collect about 8% of its income on taxes that do not fall into redistribution.

Table 5: Budget Composition

Region	Income (pesos)	Ramo 28 (% of budget)	Ramo 33 (% of budget)	Other Taxes (% of budget)
North	609 553 090,85	33%	43%	6%
Centre	1 368 024 310,99	37%	39%	8%
South	412 772 102,41	32%	55%	3%

There are, nevertheless, few issues regarding redistribution of income via the federal government. First, there is a phenomenon of corruption, which is a significant issue Mexico is facing. Redistribution of money makes corruption easier and makes the allocation of money less effective.¹¹⁷ The second issue was investigated by James Alm.¹¹⁸ He found evidence that regions are more likely to spend finance effectively when they are the ones collecting the money. He finds

¹¹⁴ Sonia Aruajo, David Bartolini, and Agustin Reedonda, „Fiscal Federalism and Regional Disparities: Evidence from Mexico“, *Cepal*, 5.

¹¹⁵ translated from „Hablemos de ingresos en los estados“, IMCO (February 2020). <https://imco.org.mx/hablemos-de-ingresos-en-los-estados/>

¹¹⁶ *Ibid.*

¹¹⁷ James Alm, „What Motivates Tax Compliance“, *Journal of Economic Surveys* 33, no. 2 (April 2019), 3.

¹¹⁸ *Ibid.*, 5.

that self-collected finances tend to be invested in more long-term and more business-friendly projects, whereas money the regions receive from higher levels of the government or through redistribution tend to be spent in a less long-term manner. Baldwin and Krugman also found evidence that if the local governments are responsible for the financing of the majority of their spending, they have a strong incentive to be more thorough in their tax-collection and growth-enhancing policies.¹¹⁹ Therefore, even though the redistribution can play a crucial role in the development of certain regions, it is, by no means, the ideal access to resources.

Apart from the redistribution policies, the Mexican government has, over time, launched several programs targeting various issues connected with regional disparities. In general, these programs focus entirely on one issue. One example was the program Oportunidades whose objective was a reduction in poverty. Oportunidades turned out to be successful in its reduction of the extreme poverty in Mexico.¹²⁰ These governmental programs are important; however, they do not focus on regional (or economic) growth which could have solved the roots of the issues leading to poverty.¹²¹ Furthermore, there is a lack of governmental programs focusing on cross-border development of federal entities. Cross-border cooperation is important for tackling complex problems, since problems are usually crossing state borders and it is essential to target them holistically rather than on the lower levels (a significant infrastructure project might have impact on surrounding federal entities).¹²²

There were some more broad incentives created targeting regional development, as, for instance, Plan Nacional de Desarrollo 2001-6, that tried to address some of the regional challenges in set regions (it divided Mexico into 5 mesoregions) but there were very few structures and resources to support this concept further.¹²³ Another program created was Programa para el Desarrollo de la Industria del Software (PROSOFT). Its focus was on the development of software, but it was not

¹¹⁹ Aruajo, ed. "Fiscal Federalism and Regional Disparities", 6.

¹²⁰ Joaquín Bracamontes Nevárez and Mario Camberos Castro, "La incidencia de pobreza e impacto del programa Oportunidades en el país y el Estado de México", *Economía Informa*, no 393 (July-August, 2015): 21-34, <https://www.sciencedirect.com/science/article/pii/S0185084915000262>

José Arturo Cerón Vargas and María del Carmen Hernández Eguiarte, "Análisis del Impacto del Programa Oportunidades en el Ingreso Autónomo de sus Beneficiarios", *Economía Informa*, no. 406 (September-October 2017): 63-79, <https://www.sciencedirect.com/science/article/pii/S018508491730049X>

¹²¹ OCDE, *Estudios de la OCDE de Innovación Regional*, 26.

¹²² Capello and Nijkamp *Handbook of Regional Growth and Development Theories*, 157.

¹²³ OCDE, *Estudios de la OCDE de Innovación Regional*, 30.

very successful and it expired in 2013.¹²⁴ Concerning programs for regional development, if there is initiative targeting growth, there is almost always a lack of coordination between the regions.

The last role of the government is the management of macroeconomic stability in Mexico. The Mexican government decided to base their macroeconomic strategy on cheap labour. That led to stagnating salaries in Mexico as, in relative terms, they stayed the same for the last 30 years. That resulted in Mexico having the lowest paying jobs in the whole OECD (including the manufacturing sector, which is the backbone of Mexican exports).¹²⁵ However, as Mexico has been creating its own clusters, more than basing their economic growth on cheap labour, it should revise its policy and base in on more value-added products and economic activity. One of the possible solutions to the dire economic conditions in the South would be to enable the rise of salaries across Mexico through different management of monetary policy, resulting in an increase of salaries in productive areas, and making the labour in the South cheaper, hence making it more attractive for some international companies.

¹²⁴ Ibid, 30.

¹²⁵ Luis F. Munguía Corella, „Productividad, Salarios y Trabajo digno en México“, *Friedrich Ebert Stiftung* (April 2019), 4. <http://library.fes.de/pdf-files/bueros/mexiko/15508.pdf> and Raymundo Campos, Gerardo Esquivel, Nora Lustig, „The rise and fall of income inequality in Mexico: 1989 - 2010“, WIDER Working Paper, No. 2012/10: <https://www.econstor.eu/bitstream/10419/80910/1/684937743.pdf>

4 PART IV: The SWOT Analysis

The following section will look at the data and information gathered in the Part III and implement them on the three defined regions through a SWOT analysis, giving the date a more regional outline and perspective.¹²⁶

4.1 The North

4.1.1 Economic Reality and Physical Capital

From an overall economic perspective, the North's economic performance has been relatively good. With its population of nearly 30 million inhabitants (which is roughly 24% of Mexico's population) its GDP reaches up to around 30%. Over half of the North's states surpass the national average of GDP per capita (see Figure 8) – the average for the region is 170 thousand pesos per capita which is above the national average of 141 thousand pesos per capita.

Figure 8: The North: GDP per capita versus annual growth of GDP in period 2008-2018¹²⁷

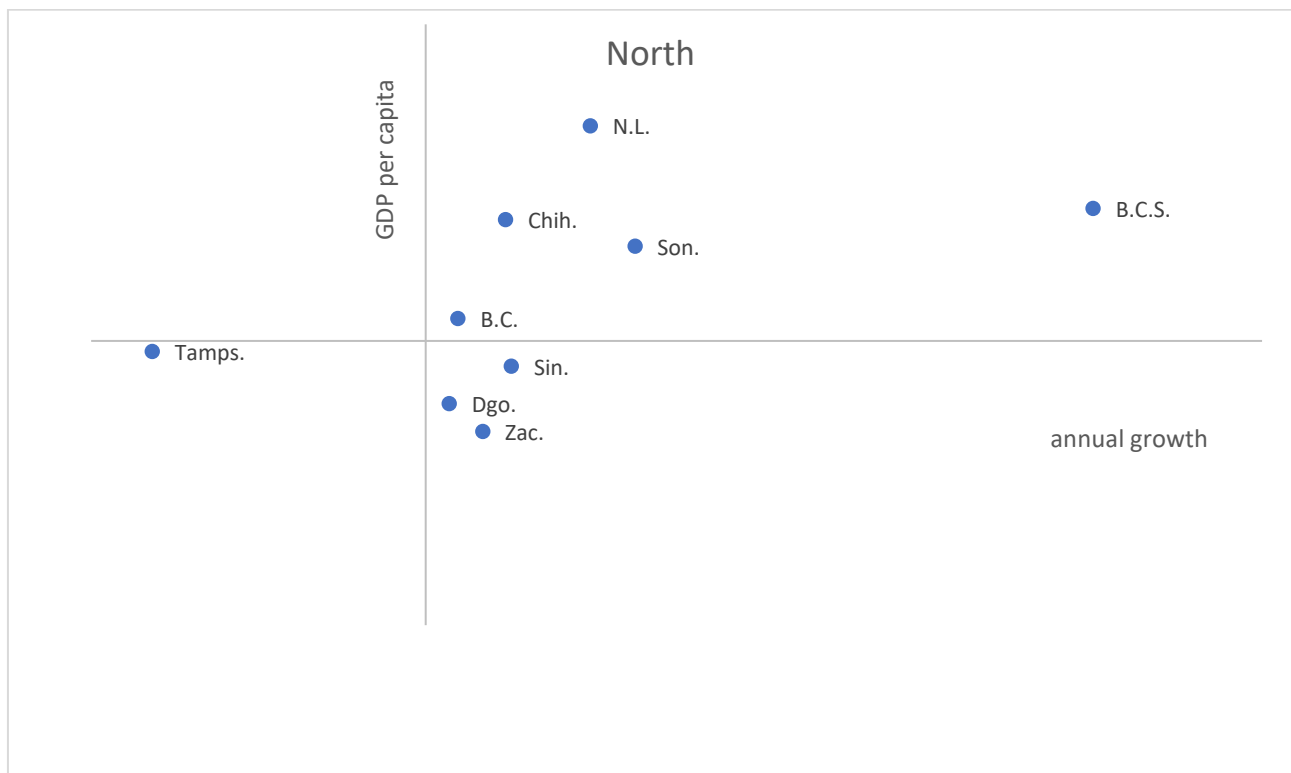


Figure 8 breaks down the North's federal entities on a graph where the horizontal axis is the national average for annual growth and the vertical axis is the national GDP per capita. Upon

¹²⁶ "SWOT Analysis: An in-depth analysis of regional strengths, weaknesses, opportunities and threats", U.S. Economic Development Administration, <https://www.eda.gov/ceds/content/swot-analysis.htm>

¹²⁷ INEGI

further examination, Figure 8 demonstrates that over half of the states (notably all the states bordering the United States) have a GDP per capita above national average. Data also shows that, except for Tamaulipas, all the federal entities in this region are growing above the national average. We can, therefore, assume that the North is in a relatively positive position in both short and long run.

The best performing federal entity in the region is Nuevo León with its GDP per capita of 249 thousand pesos. Nuevo León is also the most populated of the North's states (over 5.3 million inhabitants). Its capital, Monterrey, is the financial, commercial and industrial centre of the North and the industrial capital of the country.¹²⁸ Other well performing states in the region are Baja California Sur with its GDP per capita of about 208 thousand pesos, but with relatively low population of 1 million, followed by Coahuila, another border state, with its GDP per capita also surpassing 200 thousand pesos.

The economically weakest states of the region are Zacatecas whose GDP per capita does not reach 100 thousand (roughly 96.6 thousand pesos per capita, population of 1.6 million) and Durango with 110.5 thousand and 1.8 million population. Both these federal entities are low in population, however they are growing at faster rate than the national average, therefore potentially reaching better results in the future.

Apart from Mexico City, the North has been the best performing region of Mexico economically. That is a result of its closeness of the US, as the majority of maquiladoras are located in the North. The dependence on the manufacturing sector, maquiladora industry in particular, generates growth and income for the region, however, it has some negative side effects¹²⁹ which will be further analysed in the Export section. In summary, from the economic perspective, the North has not only been scaling above the national average in its economic activity, but it has also been growing steadily and has been able to draw upon its closeness to the US.

4.1.2 Access to Finance

As previously mentioned, physical capital plays a crucial role in the development of a region. Foreign direct investment is one possible way to attain some of the necessary capital. The North

¹²⁸ José-Ginés Mora, Francisco Marmolejo, vera Pavlakovich-Kochi, „Nuevo León, Mexico“, OECD, *Peer Review Report* (November 2006): <https://www.oecd.org/mexico/37809300.pdf>

¹²⁹ Fujii, Candaudap, and Gaona, „Exportaciones, industria maquiladora y crecimiento económico en México a partir de la década de los noventa“

has been rather successful in attracting foreign direct investment, again benefiting from its closeness to the United States – the biggest source of investment for Mexico. Overall, the North attracts about 40% of the total FDI inflow to Mexico, making it the highest receiver per capita.

Nuevo León is the highest recipient of FDI in the region – 14% of the total FDI influx (4 539 million US dollars), making it the second highest receiver in the country, right after Mexico City. Third place is taken by Coahuila with 9 173 million US dollars (9% of total), and Baja California, Tamaulipas and Chihuahua taking 7th, 8th and 9th place respectively nationwide.

On the other hand, the North has not been receiving many remittances – their amount being the lowest, which only indicates that there is not much need for it in the first place. It also does not receive a significant amount of finance from the federal government – around 610 million pesos in 2018.

4.1.3 Products and Export

The North concentrates about 57% of all Mexican exports. It has grown steadily as Mexican exports grew, from 144 million US dollars in 2008 to 222 million in 2018. Its share, however, has stayed constant over time – in 2008 it represented 56% of total share.

The region's exports are mostly concentrated in federal entities bordering the United States; with exception of Sonora, each federal entity exports over 30 million US dollars per year. The concentration on the border is even more notable upon observation of states not bordering the United States, as Sinaloa, Zacatecas and Durango export less than 10 million US dollars per year, which is on the lower scale of the national average, but may be also explained by their low population (both having a little bit more than 1.5 million inhabitants). This indicates that even though the North is an exporting region, its production is concentrated along the border with the United States. That is a result of the nature of its export commodities. Those are mainly manufactured goods for the U.S. companies that make use of cheap Mexican labour.

For a better understanding of the issue, it is necessary to investigate what commodities are exported and how much sophistication is needed for their production.

Products

According to our theoretical framework we assume that exports are important for a region's development. This is because basing your production on exporting commodities may lead to the

The data indicates, and the Figure 9 shows, that the North has created a cluster surrounding machinery, mechanics and electronic equipment, as well as vehicles (especially the automobile industry). According to an investigation of Mendoza, the manufacturing sector, especially the automobile industry, are the industries with the highest sophistication, generating the most income. That would imply that the North would have intensive technological research and high sophistication. However, even though the automobile industry products are generally known to be in need of technological research and high sophistication, that is not the case for the federal entities belonging to the North. Even though the North is dependent on the manufacturing industry, its close relations with the US lead to some negative side effects connected to its production chains, especially the manufacturing ones. The North takes part in the beginning and end of those chains, playing a role in the extraction of materials and then in the final assembly of the product, but is in great part omitted from the process of development, research and other improvement of productions and the development of these products, which generates the most income.¹³³

Another interesting observation the data has indicated is that North has a very low number of companies. Yet, it has a very high concentration of companies of over 100 employees. That indicates that there is an absence of small- and middle-sized companies in the region, but a high number of big, oftentimes international companies. These companies may play a crucial role in bringing investments and creating jobs; however, evidence indicates that big, and especially foreign-owned companies do not bring as much capital and do not create as much employment as middle-sized, home-grown companies.¹³⁴

From the data, we may also conclude that the North benefits the most from its closeness to the US. It shows high levels of specialization in the manufacturing sector, and an even bigger tendency towards the technologic level of production.¹³⁵ But, as mentioned before, technological research does not take place in the North. Except for Nuevo León, which is scaling high in terms of patents per million inhabitants (over 90), only one other of the North's federal entities is in the top 10 (Coahuila on 8th place with 31.4 patents per million inhabitants).

¹³³ Mendoza, Segovia, González, „Análisis regional de sofisticación y centralidad de las exportaciones mexicanas“, 149.

¹³⁴ Olvera, “Inversión Extranjera Directa en México”, 21.

¹³⁵ OCDE, *Estudios de la OCDE de Innovación Regional*, 24.

Thus, even though the North is performing very highly in most of the categories investigated, there is one issue it should address in the long run. It is its complete dependence on the United States and the investments coming from them. It hinders the development of services sector, which is necessary for its development in the long run. It also takes the North away from the research and development of sophisticated products, which generates income and helps to develop other more sophisticated clusters in the region.

4.1.4 Human capital

The North has also been performing high nationally in terms of employment, specifically, it has very a low unemployment rate and very low employment in the informal sector (only Zacatecas and Durango have informal employment higher than 50%), Nuevo León and Baja California Sur both have informal employment at 37%, which is low compared to the rest of the country.

In terms of education, the North has the highest overall results as well. Apart from Zacatecas, all federal entities have their active population completing, on average, over 10 years of education. This also results in high labour productivity. That might, however, also be influenced by high immigration, as it is usually the educated population that migrates.

High immigration is another trend the North experiences. All its federal entities experience some amount of immigration. Nuevo León has the second highest immigration in Mexico in terms of absolute numbers, followed by Baja California. In the top ten there is also Coahuila (5th), Baja California Sur (8th) and Sonora (9th). Immigration is one of the secondary impacts of positive economic growth, but it also reinforces the growth further. With the influx of educated people that look for opportunities, the companies are more likely to locate there as well, leading to lock-in as it reinforces itself further.

The following table (Table 6) provides a SWOT overview of the North which summarises the data.

Table 6: The North: the SWOT analysis overview

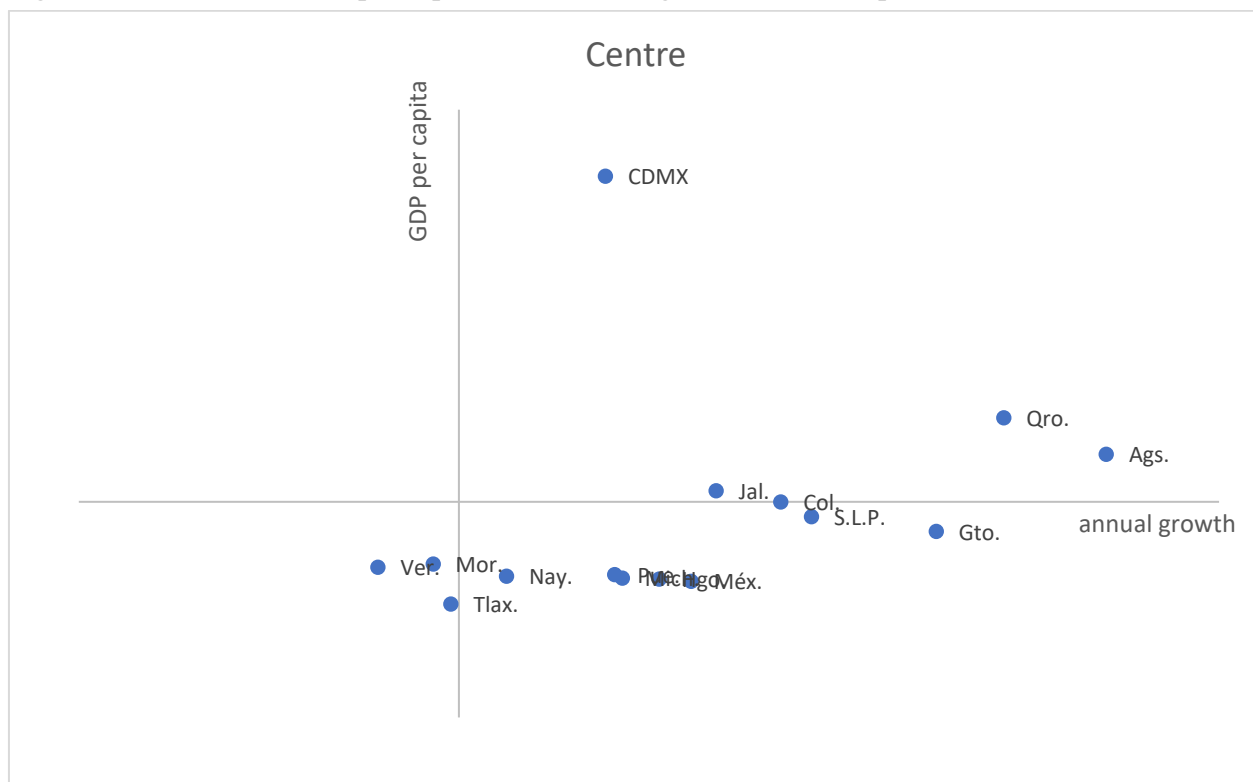
North	
Strengths	Weaknesses
<ul style="list-style-type: none"> > high GDP per capita (169 749 pesos) and high growth (over national average) > export oriented (over half of overall export of Mexico) > manufacturing industry clusters (automobile and electronic industry) > educated human capital > low employment in informal sector and relatively low unemployment rate > high labour productivity > low in services 	<ul style="list-style-type: none"> > lower number of companies > more expensive labour compared to South of Mexico > cut out of middle-supply chains in manufacturing industry which requires higher technological research
Opportunities	Threats
<ul style="list-style-type: none"> > inflow of FDI > closeness to the United States > concentration of companies with over 100 employees, location of many international companies > high immigration which helps providing human capital 	<ul style="list-style-type: none"> > dependency on export to the United States > not all present international companies bring technological research

4.2 The Centre

4.2.1 Economic Reality and Physical Capital

The Centre has the most federal entities, thus, possesses the highest population (74.6 million inhabitants). The Centre, therefore, concentrates most of Mexico’s economic activity. The GDP of the region reaches 10 193 165 million pesos. That, however, makes an average of 137 thousand pesos per capita, which is lower than the national average (141 thousand). That is a result of the sheer size of this region – in terms of area and population. The next Figure (Figure 10) puts the economic situation of the region’s federal entities into perspective.

Figure 10: The Centre: GDP per capita versus annual growth of GDP in period 2008-2018



A striking exception in the region is Mexico City, whose GDP per capita reaches 356 thousand pesos which is more than double the national average, and whose population is over 8 million inhabitants, making it one of the biggest cities in the world. There are only three other states surpassing the national average for GDP per capita, those are Querétaro (197 thousand pesos), Aguascalientes (173 thousand), and Jalisco (149 thousand), with Colima reaching the national average of 141 thousand. Tlaxcala is the only state falling significantly lower than 90 thousand pesos per capita, lagging significantly behind the rest of the states. Nevertheless, most of the federal entities in the Centre growth faster than the national average of 2%. Morelos, Tlaxcala and Veracruz are, however, states which grow slower than the national average and need to address their economic reality before they start falling behind even further.

As noted earlier, the Centre concentrates the most economic activity in Mexico, with Mexico City concentrating 18% and the surrounding state Estado de México 9%, which, together, has roughly 27% of the overall Mexican GDP taking place in one region. This high concentration of economic activity has a significant impact on the region. The federal entities close to Mexico City face

significant challenges when they try to face the centripetal forces towards Mexico City. Other economic centres of the Centre are Jalisco (7%) and Veracruz (5%).

Even though the Centre shows a positive economic performance overall, most of it is concentrated in very few areas, leaving the rest lagging behind. It is one of the realities of agglomeration forces, as the bigger the centre is, the more resources and human capital it takes away from its surrounding areas. This is a reality which will be demonstrated further.

4.2.2 Money

Concerning money and capital inflow, the Centre has been receiving a steady inflow of foreign direct investment. Mexico City receives 16% of the overall FDI for the year 2018. Other federal entities reaching the top 10 of receivers in Mexico are Guanajuato with 7% (4th), Estado de México 7% (5th), San Luís Potosí (6th) and Aguascalientes 10th (the remaining 5 states belong to the North). Even though these entities receive a steady inflow of foreign capital, there are some states whose FDI inflow does not reach 1% of the national total (Sonora, Tlaxcala, Nayarit). This reality only further reveals the divisions within the Centre.

The Centre also receives another important source of income – remittances. It receives the highest inflow of remittances compared to the other two regions. Michoacán, Jalisco and Guanajuato each received over 3 billion US dollars for the year 2018, and the majority of the remaining received over 1 billion US dollars. That plays a significant role in the development of the region.

4.2.3 Products and Export

As the Centre is so diverse, its economic base and export products are also more diverse. There are entities whose GDP is more focused on agriculture (Michoacán); states focusing on manufacturing goods are oriented mostly north of Mexico City (Guanajuato, Querétaro and San Luís Potosí); and the centric region around Mexico City which is based entirely on services.

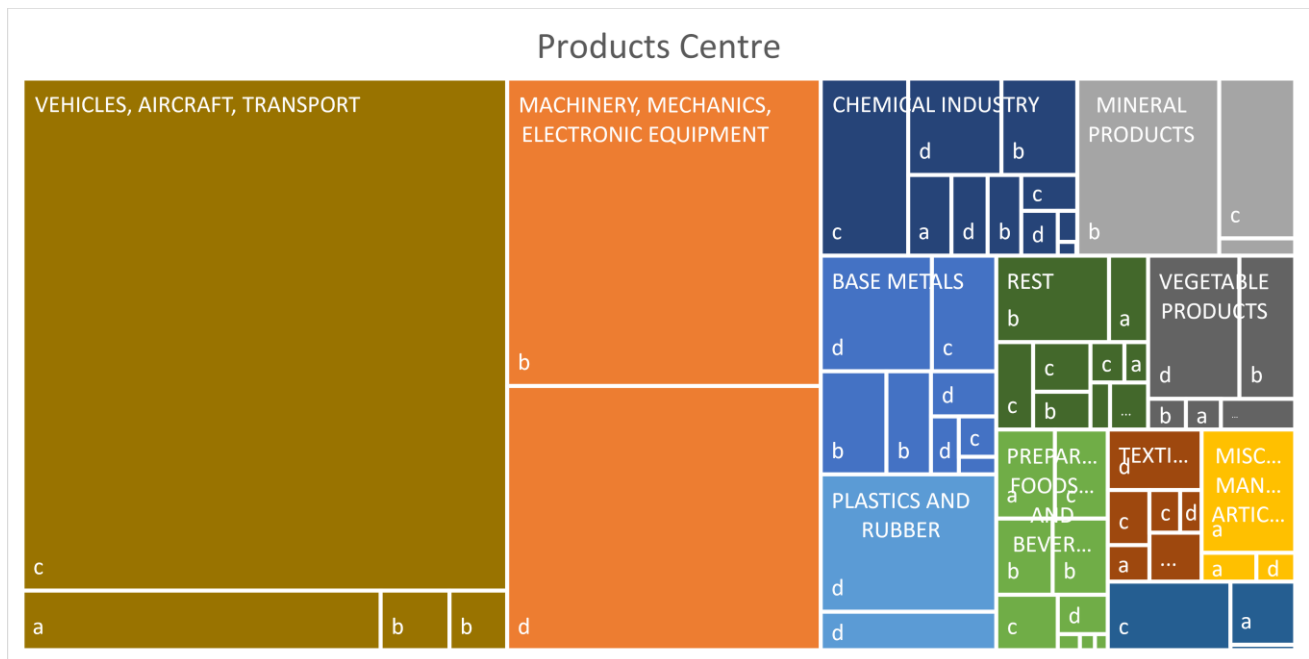
The Centre has been quite successful in its exporting sector in recent years. Its share of the exports has nearly doubled over the period between 2008 to 2018, from 68 million US dollars to 136 million dollars. Its share of the total national export has also grown from 26% to 35% (compared to the North whose share of exports has stayed roughly constant during the same time period). This indicates that the Centre has grown a stronger base for exporting and was able to find new opportunities. The biggest exporters became Jalisco, Guanajuato and Estado de México (all of them

having exports worth more than 20 million US dollars), followed by San Luís Potosí, Guanajuato and Puebla, all of these regions having strong bases in the automobile and electronic industries.

Interestingly, Mexico City’s exporting has been rather weak. It is one of the least exporting federal entities in the region and its exporting has decreased over the period observed –the only federal entity in the region to do so. The remaining regions experienced some level of increase, with some up to over 50% (San Luís Potosí, Guanajuato, Guerrero, Nayarit, Aguascalientes, Michoacán, Puebla, Tlaxcala, Morelos).

Overall, the Centre is based primarily on the tertiary sector, especially around Mexico City and Estado de México. There are, however, some manufacturing and automobile centres, some to north in the state of Guanajuato, but also South of Mexico City (Puebla). The following Figure shows the main exporting products and commodities from the Centre (see Figure 11).

Figure 11: The Centre: Exporting Commodities Distribution



As the Figure 11 shows, the manufacturing of automobile parts takes the biggest share of the export. However, the Centre also has a very strong production of electronic equipment. The biggest centres are Guanajuato, San Luís Potosí and Puebla. Other notable exported products come from the chemical industry, which is located mostly in Mexico City and requires high levels of technological research. Apart from the chemical industry, Mexico City has also created a cluster around

processed food, though this might not be apparent from the statistics.¹³⁶ These exporting commodities require high technological research and sophistication in which, compared to the North, has been successful in the Centre.

In technological research and development, the Centre has few centres to draw from. Leading is Mexico City (with over 90 patents per million inhabitants), but also Jalisco, Querétaro, Aguascalientes and Guanajuato, all producing over 40 patents per million inhabitants (only Nuevo León from the North is in top 5 patent producers in Mexico). In the case of cities, it is Mexico City, its neighbouring Cuernavaca (located in Estado de México) and Guadalajara (Jalisco), acting as other centres of technological research and development.¹³⁷

Another beneficial addition to the Centre is the fact that many companies are located there. It has a very high concentration of companies, especially around Mexico City. The composition of companies is relatively balanced as there are small and medium companies, but also those with over 100 employees (Mexico City and Estado de México both have over 3000 companies with over 100 employees located there).

The Centre was able to create various clusters and start growth, which might be more sustainable in the long run, as there are more economic centres and a base of technological research. The presence of companies and a research environment attracts more capital, people and companies which all help further the development and growth of the region. There is, however, one issue the region is facing: the problem of Mexico City, which is so big and so strong economically that it draws away resources and human capital from the surrounding areas, making it more difficult for them to develop as many resources are drawn away (externality of agglomeration forces).

4.2.4 Human capital

Human capital is one of the advantages of the Centre. The Centre is the most populated region of the three (over 32 million inhabitants in total, which translates to roughly 59.6% of the national total) and, thus, has the highest amount of labour that it can draw from. Another advantage is that the labour force is educated. With the highest number of universities¹³⁸, Mexico City has on average

¹³⁶ Mendoza, Segovia, González, „Análisis regional de sofisticación y centralidad de las exportaciones mexicanas“, 170.

¹³⁷ OCDE, *Estudios de la OCDE de Innovación Regional*, 24.

¹³⁸ „Universidades por Estado“, *Gobierno de México, Sistema de Información Cultural*, https://sic.cultura.gob.mx/lista.php?table=universidad&disciplina=&estado_id=

over 11 years of education per active worker, but many other federal entities of the Centre reach average education over 10 years – especially in the exporting regions like Estado de México, Jalisco, and Querétaro. There are also regions with a low education level, Michoacán, for example, is not even reaching 9 years on average, showing the state’s need to focus more on this area.

With high amount of labour force, however, comes the problem of creation of formal employment. The Centre has been successful locally in job creation, especially in the federal entities with high levels of export, as they grow the fastest, the most successful is Querétaro and Aguascalientes, but also Michoacán, Guanajuato, San Luís Potosí, Querétaro and Jalisco. In absolute numbers Mexico City, Estado de México, Jalisco and Guanajuato are in top 5 nationwide. That, however, is not enough to meet the trajectory of population growth in the region.

Even though the Centre has relatively low unemployment (exception of Tlaxcala with 4%), formal employment varies significantly (see Table 3). The most striking example is Mexico City, whose formal employment reaches 81% (and informal employment is rather low), but the surrounding Estado de México has formal employment of only 21%. This demonstrates the relationship of these two entities, as the Estado de México plays the role of the periphery of Mexico City and many informal workers commuting to Mexico City live there. Other entities with high levels of informal employment are Tlaxcala and Veracruz, both reaching an informal sector of more than 70%. Generally, the Centre has significant differences in terms of informal and formal sector, as it does not reach the formality of the North, but neither the amount of informality of the South.

This also translates into the labour productivity of the region. Mexico City has very high labour productivity, Querétaro, and Aguascalientes are also high, but a majority of the federal entities have low productivity, with Tlaxcala being very low on the scale. This is another side effect of Mexico City, which attracts most educated and productive labour from the surrounding states.

The Centre has experienced a steady inflow of people over time. Interestingly, Mexico City experiences the highest emigration in the whole Mexico. That is connected to the fact that Mexico City is one of the biggest cities of the world and experiences many negative side effects connected to its overpopulation (congestion, pollution – one of the most polluted cities on the planet¹³⁹, overpopulation, urbanization problems etc.) as people tend to migrate to other big cities with

¹³⁹ Víctor Hugo Páramo Figuerola, „Estado de Calidad del Aire en México“, *Gobierno de México*, <https://www.gob.mx/inecc/es/articulos/estado-de-la-calidad-del-aire-en-mexico?idiom=es>

different opportunities. The only other states experiencing emigration are Michoacán (as it is also the one with the least job opportunities etc.), and to some extent Veracruz, whose economic growth has been slowing recently. The remaining regions are experiencing immigration, especially Querétaro, but also Estado de México, Tlaxcala, Puebla, Hidalgo, Guanajuato, and San Luis Potosí.

From all the data investigated, we may see that the Centre has been developing and growing steadily, with a lower GDP per capita, but relatively high annual growth. It has created various clusters and has also been successful in creating its own technological research. It faces challenges connected to Mexico City, which is the best performing federal entity in the region, but also the one place drawing resources and human capital from its surrounding states, making it more challenging for them to develop.

Table 7: The Centre: the SWOT analysis overview

Centre	
Strengths	Weaknesses
<ul style="list-style-type: none"> > still relatively strong economically (GDP per capita 136 702) and growth above national average > economic, cultural and educational stronghold and centre Mexico City > strong services and technology centre > high concentration of companies > relatively dense population, high amount of labour force > educated > high amount of companies > immigration > clusters in automobile and electronic equipment, but also chemical industry 	<ul style="list-style-type: none"> > concentration of economic activity in Mexico City and Estado de México, with some states economically lacking (including attraction of FDI) > relatively high employment in informal sector > population-wise low export compared to North (35% of exports) > except for Mexico City low labour productivity
Opportunities	Threats
<ul style="list-style-type: none"> > FDI, coming also from other parts of the world, more diverse, bringing more technological research > remittances 	<ul style="list-style-type: none"> > relatively far from any potential partners to trade with > overpopulation as a result of high immigration

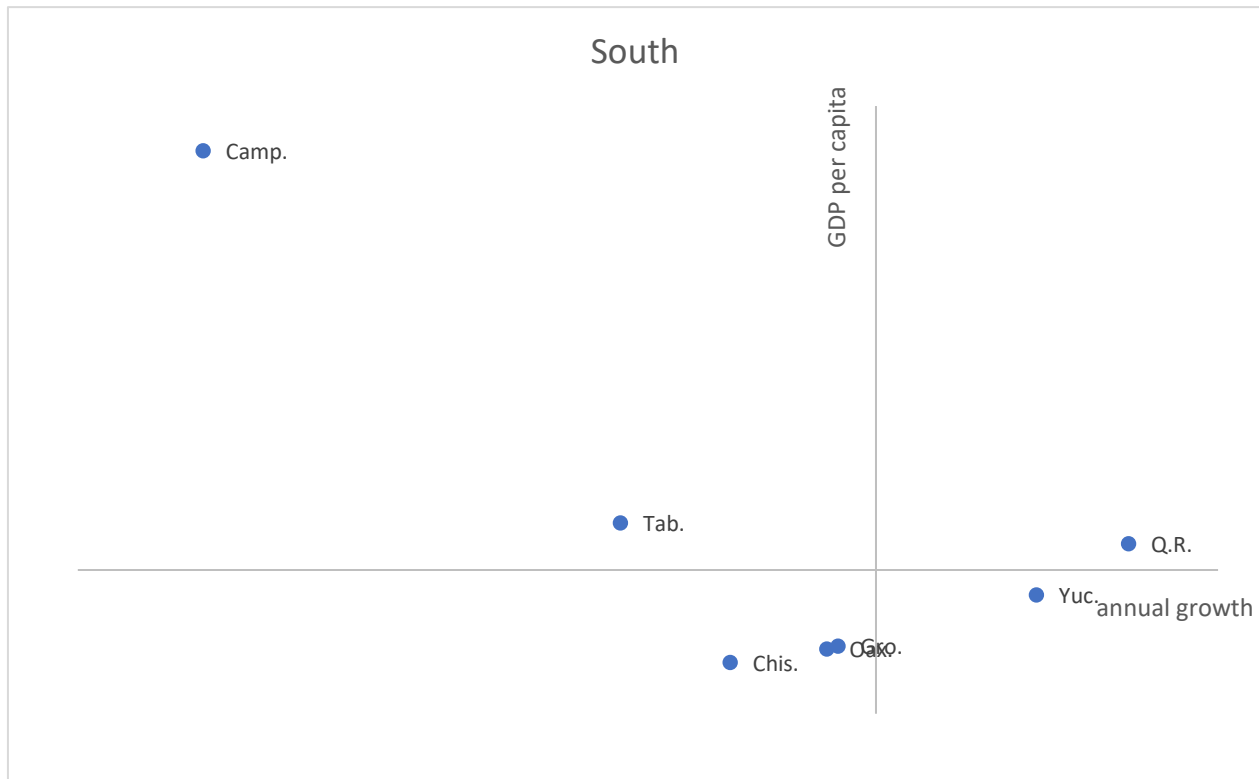
4.3 The South

4.3.1 Economic Reality and Physical Capital

The South, as a region, is the most varied one. It encompasses some of the poorest states of Mexico as well as rich ones. It is difficult to find any commonalities between all of these diverse entities, which might be the commonality of the region itself.

The South has the lowest population, barely 20.5 million inhabitants, as it consists of only 7 federal entities. Its GDP is the lowest as well, reaching only 13% of the national share (2 322 111 million pesos). This results in the South having an average GDP per capita of 113 thousand pesos, which is lowest of the three regions, far below the national average of 141 thousand pesos per capita. The following Figure (Figure 12) shows the South’s economic performance in more detail.

Figure 12: The South: GDP per capita versus annual growth of GDP in period 2008-2018



As Figure 12 shows, federal entities of the South are spread all over the graph. For this reason, it is necessary to look at the region more in detail. First, looking at the region of Campeche and Tabasco, both have a high GDP per capita but their annual growth is negative. In terms of GDP per capita, Campeche and Tabasco both distort the statistics. Campeche’s GDP per capita is nearly 556 thousand pesos, which is the highest of the whole country. It is important to note, however, that the federal entity is very low in population (less than one million inhabitants) and its economy is solely dependent on oil (and has a poverty rate of roughly 40%¹⁴⁰). As the oil prices and production decline, the state is in regression. Its GDP fell about 49% during the period between 2008 to 2018, which translates to about a 4% fall per year. Tabasco is another oil dependent federal entity whose

¹⁴⁰ Aruajo, Bartolini, Rdedonda, „Fiscal Federalism and Regional Disparities: Evidence from Mexico“, 5.

GDP per capita reaches about 188 562 pesos. It is significantly lower than that of Campeche, also due to its higher population (2.5 million inhabitants), but the state has also entered economic downfall.

The second trend Figure 12 demonstrates are two federal entities growing above the national average, Quintana Roo and Yucatán, both located on the Yucatan Peninsula. Quintana Roo is the third and last Mexican state in the South that has its GDP per capita above the national average (168 thousand pesos per capita), Yucatán does not reach the national average, but it is growing rapidly. These two states have succeeded in basing their economy on tourism and services.

The remaining states of Oaxaca, Guerrero and Chiapas, not only have their GDP low, but also, none of them is reaching the national average for growth of 2%. Their GDP per capita is less than 70 thousand pesos, yet they have the highest populations in the South (Guerrero 3.6 million, Oaxaca 4.1 million and Chiapas 5.5 million inhabitants).

4.3.2 Money

For a region that is significantly lacking behind in its economic reality, it is very difficult to access resources necessary for the funding of basic projects needed for development, as it is unable to generate the income on its own. It is, therefore, crucial for the region to receive funding externally (from abroad or through the federal government) for necessary infrastructure, education and other projects that could help the region to grow.

Scarce access to funding is one of the challenges the region is facing. The region is completely omitted from the distribution of FDI, as the FDI tends to flow to regions with already existing growth and infrastructure. None of the 7 states is in the top half of receivers of FDI, first is Oaxaca, which is in the 17th place with 1% of the national FDI.

The region is, thus, dependent on income from the federal government and remittances. In terms of remittances, there is a steady inflow into the three poorest states (Guerrero, Oaxaca and Chiapas). Those inflows are relatively high, Chiapas being the only one not receiving over 1 million US dollars per year. The remaining entities of the South, however, receive very few resources from remittances, all of them find themselves at the bottom of the scale nationally. This money plays a crucial role for the region, but as mentioned before, remittances do not generate as much growth as other finances.

The federal government sends significant amounts of money to the South. For the region, the Ramo 28 accounts for 32% of the local government's budget, whereas Ramo 33 (the one over which the state has no power) represents a striking 55% of its income. This income is key for the construction of the base and infrastructure needed for the development of the region, but, as mentioned above, it may be influenced by corruption, and also not spent in the most effective way. As the money comes from the federal government, the states do not have the power to distribute the funding in the most effective way, on the most effective sectors that might kick-start the economy.¹⁴¹

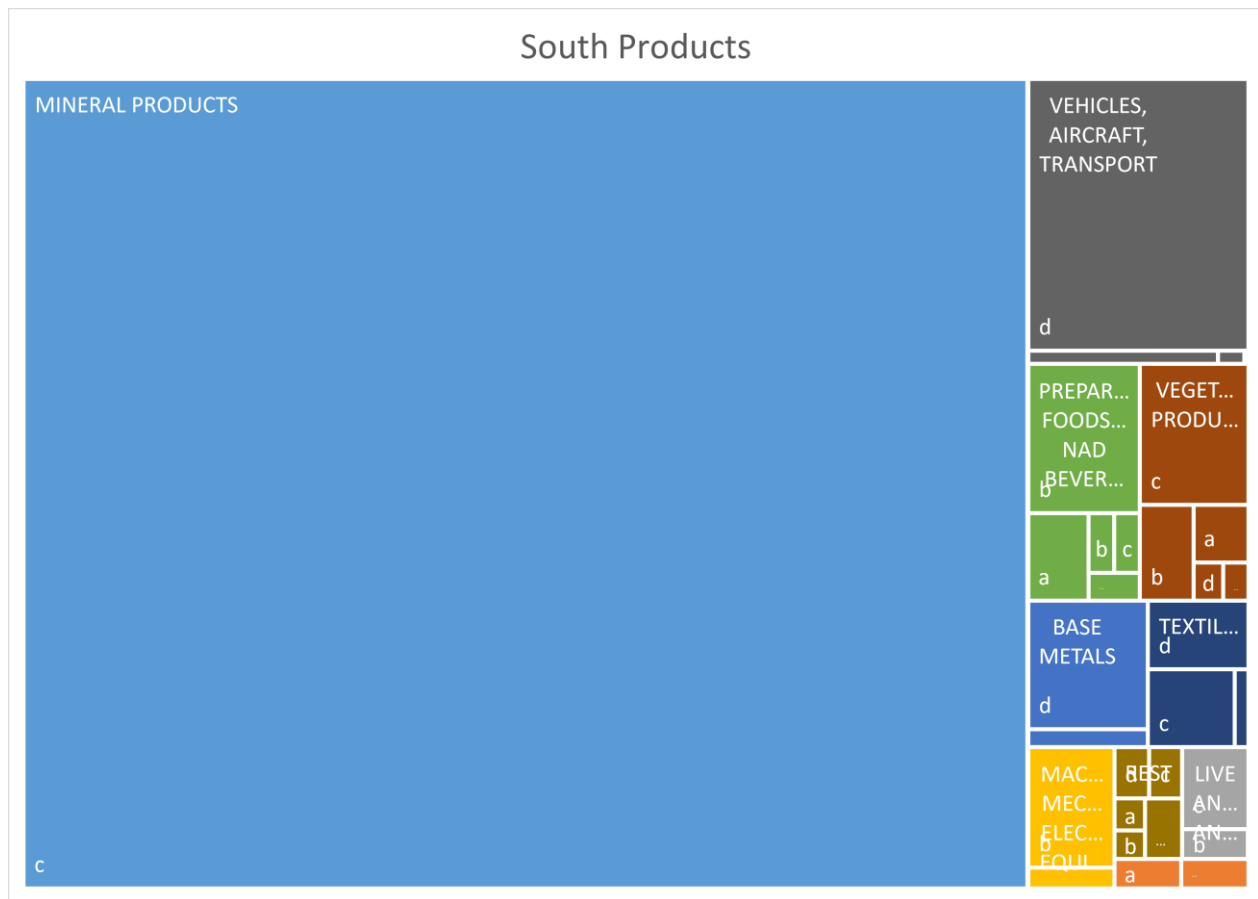
4.3.3 Products and Export

The South's worsening economic performance correlates with the exports of the region. The region's exports have over the period of 2008 to 2018 declined, the only region in Mexico to do so, from 45.6 million of US dollars to 28.6 million US dollars. Its share of total national exports thus declined from 18% to 7%. The highest decline was experienced by oil extracting states Campeche and Tabasco, but Oaxaca's and Chiapas' exports has declined as well. It can be explained by the reduction in the export of oil, which is the most significant exporting commodity of Campeche and Tabasco. The only state experiencing a peak in exporting is Guerrero, whose exports have increased over 182% (the majority of it is agricultural goods). The exports of Yucatán and Quintana Roo (24% increase) has not increased significantly even though the regions are growing, as both regions are depended on tourism which is not an export commodity.

Upon investigation of sectorial distribution in the South, the primary sector is very important for various Southern states (coffee Chiapas, mango and mezcal in Guerrero), the secondary sector is the most significant one in Campeche and Tabasco, connected to the extraction of oil. The South also has a very high ratio of the tertiary sector. Oaxaca, for instance, has over 80% of its GDP based on services and the Yucatan Peninsula is entirely dependent on tourism, as well.

¹⁴¹ IMCO, „Hablemos de ingresos en los estados“

Figure 13: The South: Exporting Commodities Distribution



As Figure 13 shows, most of the income of the South comes from oil and gas (mineral products section). The level of sophistication of the exports are therefore very low. The worst performing states are Guerrero and Oaxaca. Other activities taking place in the region, except for the extraction of oil and gas, is the production of food, drinks and tobacco, and the textile industry.¹⁴² On first glance, the region has a high concentration of companies, especially in the 3 southern states, but there is a lack of big companies with over 100 employees, which indicates that there is not much economic incentives for these companies to locate there.

4.3.4 Human Capital

In terms of human capital, the South has the worst ratio of the regions. The labour force of the most populous states rates very low in education, which is further worsened by the language barrier, as in the states of Oaxaca, Guerrero and Chiapas (as well as on the Yucatán Peninsula) there are

¹⁴² Mendoza, Segovia, González, „Análisis regional de sofisticación y centralidad de las exportaciones mexicanas“, 159–60.

various indigenous languages used. For some citizens Spanish is a second language. On the other hand, Quintana Roo, Tabasco and Campeche have on average over 10 years of education per capita. That correlates with the economic activity taking place in these regions, as oil and gas production as well as tourism require an educated labour force.

The low education translates into low productivity of the region. Campeche and Tabasco are scaling very high in terms of productivity, Quintana Roo is medium, but the southern states have the overall worse labour force performance of the region. That also correlates with the reality that, save for Quintana Roo, there is no significant job creation in the region. Oaxaca, Chiapas and Guerrero are scaling the worst nationwide. Quintana Roo is the exception of the region, as its rate of job creation has grown over 50% during period of 2008 to 2018 – which makes it the federal entity with the fastest growing job opportunities in Mexico, and 7th in absolute terms.

All these negative factors then lead to another reality the South has been experiencing during recent years, and that is high emigration, especially from Oaxaca, Chiapas and Guerrero, but also Tabasco. Yucatán and Quintana Roo have been striking opposites as they both have been experiencing high immigration.

Overall, the South is divided into three different sub-regions: regressing oil producing states, growing tourism-based states on the Yucatan peninsula and southern states lacking behind in most observed statistics. These three regions are quite different from each other, but the tourism of the Yucatan Peninsula can serve as a role model for the remaining entities.

Table 8: The South: the SWOT analysis overview

South	
Strengths	Weaknesses
<ul style="list-style-type: none"> > Yucatan Peninsula's relatively good economic performance (oil and tourism) > potential of tourism (Quintana Roo and Yucatán already making use of it) > possible cluster of agriculture, possibility for further development of already existing food and drink industry (coffee Chiapas etc.) > concentration of companies (however, most of them with less than 100 employees) > cheap labour 	<ul style="list-style-type: none"> > low GDP per capita (113 212) with growth below national average (some states even negative) > high poverty, informality, unemployment > divided between relatively well performing Yucatán Peninsula and the remaining states (Oaxaca, Guerrero, Chiapas) > oil dependent > absence of export commodity (decrease of exporting to share of 7% of overall Mexican export) > low education and language barriers > emigration and brain drain > low labour productivity
Opportunities	Threats
<ul style="list-style-type: none"> > policies of federal government of redistribution > remittances 	<ul style="list-style-type: none"> > dependent on prices of oil > low inflow of FDI

Conclusion

The aim of this thesis was to examine the three Mexican regions and to identify some of the roots of their differences as well as implications these differences might have for their further development. As the data has shown, Mexico is indeed a very diverse country. The regional economic differences are very pronounced, and each one of the three regions faces its own challenges and has its own opportunities and advantages.

The North seems to be the most developed region. It has the highest GDP per capita, as well as the biggest share of exports, it has the most qualified labour and inflow of FDI, plus its labour only further supports its development. However, it has been overly dependent on the United States. Exports based on the manufacturing industry is supporting the region's development, but this dependence on trans-border manufacturing products has resulted in the North being cut out of middle-supply chains. This resulted in a lack of technological research in the region. This outcome, together with the dependence on its northern neighbour are the biggest challenges the region is facing.

The second region, the Centre, has been also performing well, growing at very quick pace. Mexico City has been a giant of the region, which has served both as an engine for economic growth – attracting investment, providing education and qualified labour as well as technological research, but also as a negative force that “sucks out” opportunities from the surrounding areas (one of the side effects of agglomeration forces). Recently, however, there are other smaller centres being created, focusing on some parts of automobile or electronics production, namely Jalisco, Guanajuato, Puebla. The potential is there, now the biggest challenge of the region is to make use of it and to address development in the surrounding areas of Mexico City (Estado de México, Tlaxcala).

The last region, the South, is also one with the starkest differences. The region itself consists of three smaller regions – oil producing states, tourism-based states on the Yucatan Peninsula, and three southern states (Oaxaca, Guerrero, Chiapas), which are also the poorest federal entities in Mexico. The only growing states are those basing their development on tourism, the others are facing serious economic challenges. The South's performance is the worst in the country in terms of education, employment, migration and access to investment from abroad (with the exception of some amounts of remittances). The data has shown that there is a potential for further development

and cluster-creation, especially in agriculture. Nevertheless, the region has entered a vicious cycle of poverty and for it to break it, it needs external funding.

The federal government may play some role in helping the less developed regions to kick-off their development. The view on the role of the central government in regional development has been controversial. On one hand, too big centralization hinders effective allocation of resources, no interference will not solve the problem and the disparities will grow further. In any case, there are some policies that might help. One of the most common approaches is some amount of redistribution of funding. It is a necessary tool for regions that are so far behind that they have already entered the viscous cycle and are now in downward spiral, as they have problems attracting funding from elsewhere. Redistribution might be a very effective means, if used properly. However, it is necessary to leave the power to decide where the funding goes to the local governments, as they know the region the most and they realize where the finances are most needed for future development. That goes against the Mexican government's approach, which gives the most economically lacking regions the lowest share of funding that can be used freely.

Another important tool for regional development the federal government can use are trans-regional cooperation programs, where the government could take part either through funding, or as an intermediary. As the regions do not have solid borders, and are very interlinked with each other, it is crucial to plan and design policies that keep this in mind. Some regional programs already exist, but they tend to target only one issue, such as poverty, which, even though important, is a side effect of a region's problems and it might be more useful to tackle the problem which leads to poverty in the first place. Addressing poverty and infrastructure is important, but it will not instigate regional growth nor tackle regional inequalities, thus not solving the origin of the problem itself.¹⁴³ Furthermore, if addressed properly, promoting growth in a region may have positive external effects on the surrounding regions (or vice versa) as they can make use of the infrastructure or opportunities created in their neighbouring region.

Looking back at the three regions, we may notice that many of the problems each region has are complementary. High dependence on the US in the North, may be somehow lessened with growth of other regions, creating a market of consumers within Mexico itself. Lack of foreign investment may be substituted with home-based investment and government redistribution, the South may take

¹⁴³ OCDE, *Estudios de la OCDE de Innovación Regional*, 26.

up the role of a cheap labour force for the rest of the country and the creation of regional clusters may help to solve the problem of Mexico City, a city being too big to handle. If nothing else, this thesis shows that there is a potential for faster and more connected growth in Mexico, there is capital and there are qualified workers. Therefore, some of the issues that Mexico faces in terms of regional development may have solutions and are not impossible to solve.

The methodological approach enabled this paper to identify some key characteristics of each region and showed that each one of them has its challenges and opportunities. The three theories – New Economic Geography, cluster theory and territorial capital theory – put together current trajectory of the regions and showed some inside look at why these regions diverge. That might be a useful tool for other investigators researching regional differences in other countries.

This method of approaching regional differences from a broader perspective is not used often by economists as it may lead to generalization of the problem. However, this thesis shows that though focus on each region is important, the overall analysis of the country from a broader perspective should not be neglected, as it is important to see each region within a framework of one country's growth. This perspective avoids bias towards making each region an "enemy", exploiting one another, but rather an "ally" that may have resources and opportunities to help solve problems otherwise impossible to solve on its own. Through a case study of Mexican regional differences this thesis shows that this method has some merits and needs further exploration.

Lastly, it is worth noting that the regional disparities in Mexico are an issue well known by its society and its politicians but have been not paid enough attention. Yet, it is a significant problem that should not be overlooked. The marginalisation of worse off regions leads to rise of populism in Mexico and the current President, Andrés Manuel López Obrador, won his presidential seat especially thanks to the poorer regions like Oaxaca, Chiapas, Guerrero. His presidency may bring more attention to the poorer regions, as he has suggested various big infrastructural projects supporting the South (for example Tren Maya that is supposed to promote more tourism). This thesis, however, shows, that it is not the infrastructure the regions need, but, rather, more focus on human capital and exporting commodities, that will generate development. On the other hand, presidency of Andrés Manuel López Obrador may force the opposition to pay more attention to regional differences in Mexico if they want to win next elections. Let this paper serve as one of the contributions to the debate for their policymaking.

Summary

Se snižující se důležitostí národních hranic a rostoucí rolí regionů a jako hlavních ekonomických aktérů, regionální rozdíly se stávají jedním z palčivých problémů, kterým se státy pokouší čelit. Cílem této práce bylo blíže analyzovat případ regionálních rozdílů v rámci Mexika. Jelikož Mexiko má rozdíly mezi jednotlivými regiony velice významné, je potřeba nejprve prozkoumat jejich trendy a aktuální situaci před tím, než začne docházet k navrhování potenciálních řešení.

První část práce dává analýzu do teoretického kontextu. Jako základ je využita Nová ekonomická geografie, teorie, která zdůrazňuje důležitost jak fyzického, tak především lidského kapitálu pro hospodářský růst. Dále pak práce vychází z Porterovy teorie clusterů, která klade důraz na export jako hlavní motor hospodářského rozvoje. Pro samotnou analýzu je pak použita metoda SWOT. Jedná se o metodu, která řadí jednotlivé charakteristiky regionu do čtyř kategorií: silné stránky, slabé stránky, hrozby a příležitosti.

Další část práce dělí Mexiko do tří regionů: Sever, Centrum, a Jih. Vybírá si dělení podle Gianfranco Vestiho z jeho knihy *Diagnóstico de Desarrollo Regional: México*. Toto dělení je nejvhodnější k cíli teze, protože řadí regiony jak podle jejich teritoriálního umístění, tak podle dalších především ekonomických podobnostech.

Třetí část práce provádí analýzu na základě dat získaných především z INEGI, ale také dalších oficiálních mexických institucí, jako například centrální banka Banco de México, nebo COMOVAMOS. Samotná analýza se dělí na čtyři různé kategorie: fyzický kapitál, lidský kapitál, technologický výzkum a inovace a přístup federální vlády k regionalismu. Každá kategorie ukazuje regionální situaci dané statistiky a snaží se ji ukázat na národním měřítku a souvislostí.

Čtvrtá část se již zabývá SWOT analýzou, kterou zhodnocuje jednotlivé regiony. Dochází k závěru, že Sever jako region se nachází v nejlepší ekonomické situaci, což je důsledek manuformního průmyslu zaměřeného na export. Tento region těží ze své blízkosti USA, ale důsledkem nadměrného propojení je absence technologického výzkumu pro rozvoj produktu na Severu – k tomu dochází v USA. Centrum zažívá hospodářský růst. Ačkoliv se většina ekonomické aktivity se odehrává v okolí Mexico City, Centru se podařilo vytvořit několik dalších clusterů i v jiných svých regionech. Poslední region, Jih, je z daných regionů ten nejrozmanitější, avšak postrádá

hospodářský růst. Jeho ekonomika je založená na ropě, turismu a zemědělství. Nachází se v něm jak hospodářsky rostoucí mexické státy, tak státy v bludném kruhu chudoby.

V závěru se práce pokouší dát tyto tři regiony opět do národního kontextu a navrhnout některá možná řešení pro dané regionální problémy. Klíčovou roli v nich hraje federální vláda, která může jak pomocí financí, tak pomocí role mediátora pomoci jednotlivým regionům vytvořit základnu pro růst a zároveň vytvořit své vlastní exportní clustery. Tato práce předkládá všeobecný přehled regionální situace v Mexiku a dává jí do širšího kontext. Tímto dává základy pro další výzkum a tvorbu mexické regionální politiky.

List of References

Data

Banco de México. <https://www.banxico.org.mx/>

Consejo Nacional de Población (CONAPO).

http://www.conapo.gob.mx/es/CONAPO/Tabulados_basicos

Instituto Nacional de Estadística, Geografía e Informática (INEGI), *Banco de Información*

Económica. <https://www.inegi.org.mx/sistemas/bie/?idserPadre=10200070#D10200070>

México, Cómo Vamos? (COMOVAMOS). <https://www.mexicocomovamos.mx/>

OECD statistics, <https://data.oecd.org/natincome/value-added-by-activity.htm>

Programa para Democratizar la Productividad “Atlas de Complejidad Económica de México“.

<https://www.gob.mx/productividad/documentos/atlas-de-complejidad-economica-de-mexico-179425>

Governmental Documents

“Plan Nacional de Desarrollo 2003-2006”, *Secretaría de Planeación y Desarrollo Institucional, Gobierno de México*. <http://planeacion.uaemex.mx/InfBasCon/PlanNacionaldeDesarrollo2000-2006.pdf>

“Plan Nacional de Desarrollo 2013-2018”, *Gobierno de México*.

<https://www.gob.mx/eplan/acciones-y-programas/plan-nacional-de-desarrollo-2013-2018-78557>

Encuesta Nacional de Ocupación y Empleo

“Productividad”, *COMOVAMOS* (August 2015). http://www.mexicocomovamos.mx/wp-content/uploads/2015/10/MCV_Estudio_Productividad.pdf

“SWOT Analysis: An in-depth analysis of regional strengths, weaknesses, opportunities and threats“, *U.S. Economic Development Administration*. <https://www.eda.gov/ceds/content/swot-analysis.htm>

“Universidades por Estado“, *Gobierno de México, Sistema de Información Cultural*.
https://sic.cultura.gob.mx/lista.php?table=universidad&disciplina=&estado_id= (accessed 14th
January 2020).

Figuerola, Víctor Hugo Páramo. “Estado de Calidad del Aire en México“, *Gobierno de México*,
(February, 26, 2019) <https://www.gob.mx/inecc/es/articulos/estado-de-la-calidad-del-aire-en-mexico?idiom=es>

Books and Articles

James Alm, “What Motivates Tax Compliance“, *Journal of Economic Surveys* 33, no. 2 (April
2019).

Aruajo, Sonia, David Bartolini, and Agustin Reedonda. “Fiscal Federalism and Regional
Disparities: Evidence from Mexico“, *Cepal* (2018).

Blažek, Jiří, and David Uhlíř. *Teorie regionálního rozvoje*, (Praha: Karolinum, 2002).

Bracamontes Nevárez, Joaquín, and Mario Camberos Castro, “La incidencia de pobreza e
impacto del programa Oportunidades en el país y el Estado de México”, *Economía Informa*,
no 393 (July-August, 2015): 21–34.

<https://www.sciencedirect.com/science/article/pii/S0185084915000262>

Cahrmes, Jacques. *The informal economy: Definitions, Size, Contribution, Characteristics and
Trends*, Research Network and Support Facility, EuropeAid, Rome 2016.

Calva, José Luis, eds., *Agenda para el desarrollo: Políticas de desarrollo regional*, (Volume 13,
UNAM: Miguel Ángel Porrúa, México 2007).

Campos, Raymundo, Gerardo Esquivel, and Nora Lustig. “The rise and fall of income inequality
in Mexico: 1989 – 2010“, *WIDER Working Paper*, No. 2012/10 (Helsinki: 2012).

<https://www.econstor.eu/bitstream/10419/80910/1/684937743.pdf>

Capello, Roberta, and Peter Nijkamp. *Handbook of Regional Growth and Development Theories*
(Cheltenham: Edward Elgar Publishing, 2010).

Corella, Luis F. Munguía. “Productividad, Salarios y Trabajo digno en México“, *Friedrich Ebert
Stiftung* (April 2019), 4. <http://library.fes.de/pdf-files/bueros/mexiko/15508.pdf>

- Esquivel, G, and Messmacher, M. “Sources of (non) Convergence in Mexico”, *International Bank for Reconstruction and Development*, Chief Economist Office for Latin America. (Washington D.C., 2002).
- Fajnzylber, Pablo, ed. *Remittances and Development: Lessons from Latin America*, (The World Bank: Washington, D. C., 2008). <https://www.oecd.org/dev/americas/42716118.pdf>
- Fierro, Juan Óscar Ollivier. “Proveeduría nacional a la industria maquiladora en México. Un reto tecnológico”, *Frontera norte* 19, no. 38 (July-December 2007): 191–217.
http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0187-73722007000200007&lng=es&nrm=iso
- Fujii, Gerardo, Eduardo Candaudap, and Claudia Gaona. “Exportaciones, industria maquiladora y crecimiento económico en México a partir de la década de los noventa”, *Investigación económica* 64, no. 254 (october/december 2005).
http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-16672005000400125
- López, Marcos Valdivia. “Desigualdad regional en el centro de México. Una exploración espacial de la productividad en el nivel municipal durante el período 1988-2003”, *Investigaciones Regionales*, no. 13 (2008): 5–34.
- Maclas, Javier Delgadillo. “Desigualdades territoriales en México derivadas del tratado de libre comercio de América del Norte”, *Revista eure* 34, no. 101 (Santiago de Chile: 2008): 71–98.
- Marzábal, Óscar Rodil and Jorge Alberto López Arévalo. “Disparidades en el crecimiento económico de los estados de México en el contexto del Tratado de Libre Comercio de América del Norte”, *ECONOMÍA UNAM* 8, no. 24 (september/december 2011): 78–98.
<http://www.scielo.org.mx/pdf/eunam/v8n24/v8n24a4.pdf>
- Mendoza, Sandra Edith Medellín, Miguel Alejandro Flores Segovia, and Amado Villarreal González. “Análisis regional de sofisticación y centralidad de las exportaciones mexicanas”, *Ensayos Revista de Economía* 36, no. 2 (October 2017), 147–184.
- Mora, José-Ginés, Francisco Marmolejo, and Vera Pavlakovich-Kochi. “Nuevo León, Mexico”, OECD, *Peer Review Report* (November 2006). <https://www.oecd.org/mexico/37809300.pdf>

- OECD, Education at a Glance 2019, *OECD* 2019. https://www.oecd.org/education/education-at-a-glance/EAG2019_CN_MEX.pdf
- OECD, Estudios de la OCDE de Innovación Regional: 15 estados Mexicanos, *OECD* 2009. <https://doi.org/10.1787/9789264060906-es>
- OECD, OECD Territorial Outlook, *OECD* 2001. <http://www.oecd.org/newsroom/theoecdterritorialoutlook2001.htm>
- Olvera, María Yira Figuerola. “Inversión Extranjera Directa en México: Un Análisis de sus Resultados en el Periodo 1980-2010”, *UNAM*.
- Perucca, Giovanni. “The Role of Territorial Capital in Local Economic Growth: Evidence from Italy“, *European Planning Studies* 22 (2014), 537–562.
- Porter, Michael E. “Clusters and the New Economics of Competition”, *Harvard Business Review*, (November-December 1998). <https://hbr.org/1998/11/clusters-and-the-new-economics-of-competition>
- Reyes, Celso Ramón Sarmiento. “La desigualdad regional en México: un análisis de convergencia”, *Revista de la Facultad de Economía, BUAP* no. 40 (January-June 2009): 83–95. <http://www.eco.buap.mx/aportes/revista/40%20Año%20XIV%20Número%2040,%20enero%20-%20abril%20de%202009/06%20La%20desigualdad%20regional%20en%20Mexico;%20un%20análisis%20de%20convergencia-Celso%20Ramon%20Sarmiento%20Reyes.pdf>
- Vargas, José Arturo Cerón, and María del Carmen Hernández Eguiarte, “Análisis del Impacto del Programa Oportunidades en el Ingreso Autónomo de sus Beneficiarios”, *Economía Informa*, no. 406 (September-October 2017): 63–79. <https://www.sciencedirect.com/science/article/pii/S018508491730049X>
- Viesti, Gianfranco. *Diagnóstico de desarrollo regional: México*, (EUROSociAL, no. 13, Madrid 2015) [http://sia.eurosociol-ii.eu/files/docs/1437654618-E-13\(espanol\)MX.pdf](http://sia.eurosociol-ii.eu/files/docs/1437654618-E-13(espanol)MX.pdf)

“Negative Effects of FDI In Host Countries Economics Essay“, *UK Essays*, (November, 2018).
<https://www.ukessays.com/essays/economics/negative-effects-of-fdi-in-host-countries-economics-essay.php>

“Distribución geográfica de las 68 Lenguas Indígenas de México, *Delicias Prehispánicas*,
(November 13, 2016). <https://deliciasprehispanicas.com/2016/11/13/distribucion-geografica-de-las-68-lenguas-indigenas-de-mexico/>

“Hablemos de ingresos en los estados“, *IMCO* (February 2020). <https://imco.org.mx/hablemos-de-ingresos-en-los-estados>

List of Appendices

Table 9: Abbreviations of Federal Entities

Abbreviation	State
Ags.	Aguascalientes
B.C.	Baja California
B.C.S.	Baja California Sur
Camp.	Campeche
Chih.	Chihuahua
Col.	Colima
Chis.	Chiapas
Chih.	Chihuahua
CDMX	Mexico City
Dgo.	Durango
Gto.	Guanajuato
Gro.	Guerrero
Hgo.	Hidalgo
Jal.	Jalisco
Méx.	México
Mich.	Michoacán
Mor.	Morelos
Nay.	Nayarit
N.L.	Nuevo León
Oax.	Oaxaca
Pue.	Puebla
Qro.	Querétaro
Q. Roo. or Q.R.	Quintana Roo
S.L.P.	San Luis Potosí
Sin.	Sinaloa
Son.	Sonora
Tab.	Tabasco
Tamps.	Tamaulipas
Tlax.	Tlaxcala
Ver.	Veracruz
Yuc.	Yucatán
Zac.	Zacatecas

Table 10: GDP; GDP per capita and Population per Federal Entity (year 2018)

State	Region	GDP per capita (pesos)	Population	GDP (million pesos)
Baja California	North	153 091	3 643 927	557 853,09
Baja California Sur	North	208 010	837 683	174 246,24
Coahuila de Zaragoza	North	202 464	3 070 838	621 735,14
Chihuahua	North	148 376	3 824 037	567 395,31
Durango	North	110 583	1 819 410	201 196,05
Nuevo León	North	249 215	5 315 661	1 324 742,97
Sinaloa	North	129 185	3 064 214	395 849,29
Sonora	North	189 198	3 058 534	578 668,79
Tamaulipas	North	136 525	3 669 402	500 964,95
Zacatecas	North	96 597	1 614 618	155 967,05
Aguascalientes	Centre	173 357	1 341 432	232 547,26
Colima	Centre	141 861	762 087	108 110,29
Mexico City	Centre	356 273	8 783 086	3 129 179,88
Guanajuato	Centre	122 449	5 960 991	729 919,39
Hidalgo	Centre	91 228	2 987 701	272 561,30
Jalisco	Centre	149 296	8 215 666	1 226 570,14
Estado de México	Centre	89 722	17 655 173	1 438 521,88
Puebla	Centre	94 170	6 383 845	601 167,73
Michoacán de Ocampo	Centre	91 692	4 693 438	430 351,93
Veracruz de Ignacio de la Llave	Centre	99 013	8 232 030	815 080,51
Morelos	Centre	101 025	1 992 564	201 299,75
Nayarit	Centre	92 959	1 295 355	120 415,55
Querétaro	Centre	197 250	2 097 890	413 808,12
San Luis Potosí	Centre	132 198	2 829 808	374 094,01
Tlaxcala	Centre	74 619	1 333 938	99 537,52
Campeche	South	555 893	951 435	528 896,04
Chiapas	South	50 720	5 458 436	276 850,55
Guerrero	South	66 951	3 628 820	242 952,94
Oaxaca	South	64 114	4 089 100	262 170,24
Quintana Roo	South	167 883	1 718 889	288 571,66
Tabasco	South	188 562	2 459 318	463 733,21
Yucatán	South	117 419	2 205 240	258 936,10

Table 11: FDI per states in millions of dollars and % of total national FDI inflow

FDI per state in millions of dollars and % of total						
State	1998	percent	2008	percent	2018	percent
Mexico City	4000,6	48%	7689,3	26%	5357,98	16%
Nuevo León	672,9	8%	1667,2	6%	4539,01	14%
Coahuila de Zaragoza	134,6	2%	583,1	2%	3172,83	9%
Guanajuato	10,6	0%	751,8	3%	2406,31	7%
Estado de México	747	9%	2345,7	8%	2357,5	7%
San Luis Potosí	6,1	0%	460,7	2%	1739,24	5%
Baja California	726,2	9%	1457,8	5%	1594,29	5%
Tamaulipas	345,7	4%	932,4	3%	1463,11	4%
Chihuahua	620	7%	2625	9%	1146,9	3%
Aguascalientes	69,1	1%	337,4	1%	1134,6	3%
Querétaro	125,1	1%	1071,5	4%	1092,28	3%
Jalisco	362,1	4%	1039,3	4%	1005,24	3%
Veracruz de Ignacio de la Llave	38,2	0%	607,8	2%	933,46	3%
Puebla	37,9	0%	380,9	1%	619,69	2%
Tabasco	0,4	0%	135,1	0%	522,12	2%
Baja California Sur	46,8	1%	834,2	3%	484,66	1%
Oaxaca	0,4	0%	201,2	1%	481,17	1%
Michoacán de Ocampo	4,3	0%	187,2	1%	430,54	1%
Quintana Roo	43,8	1%	302,4	1%	421,18	1%
Sinaloa	13,6	0%	175,7	1%	409,72	1%
Guerrero	2,6	0%	574,6	2%	407,69	1%
Durango	61,9	1%	488,1	2%	365,81	1%
Zacatecas	13,6	0%	1836,5	6%	269,1	1%
Morelos	60,8	1%	284,8	1%	245,92	1%
Hidalgo	7,6	0%	121,7	0%	203,39	1%
Sonora	171,1	2%	1574,5	5%	151,27	0%
Tlaxcala	8,8	0%	123,7	0%	145,24	0%
Nayarit	6,1	0%	152,6	1%	144,51	0%
Campeche	0,1	0%	150,1	1%	131,06	0%
Colima	4,1	0%	187,3	1%	98,93	0%
Yucatán	31	0%	146	0%	71,8	0%
Chiapas	0,4	0%	63,2	0%	68,75	0%

ZÁVĚREČNÉ TEZE MAGISTERSKÉ PRÁCE NMTS

Závěrečné teze student odevzdává ke konci Diplomního semináře III jako součást magisterské práce a tyto teze jsou spolu s odevzdáním magisterské práce do SIS předpokladem udělení zápočtu za tento seminář.

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Semestr a školní rok zahájení práce:

ZS 2018/2019

Semestr a školní rok ukončení práce:

LS 2019/2020

Vedoucí diplomového semináře:

Lucie Kýrová, M.A., Ph.D.

Vedoucí práce:

PhDr. et Mgr. Kryštof Kozák, Ph.D.

Název práce:

Three Different Mexicos: Application of the SWOT Analysis on Three Mexican Regions

Charakteristika tématu práce (max 10 řádek):

S klesající rolí států a rostoucí důležitostí regionů v ekonomickém růstu, více a více pozornosti se obrací na samotné regiony. Cílem práce je blíže prozkoumat případ trendů regionálních rozdílů Mexika a to z hospodářského hlediska. Pro to práce využívá Novou ekonomickou geografii, teorii, která zdůrazňuje důležitost fyzického, a především lidského kapitálu pro hospodářský růst, a Porterovu teorii clusterů, která klade důraz na export jako hlavní motor hospodářského rozvoje. Pro analýzu si práce dělí Mexiko na tři regiony: Sever, Centrum, a Jih a používá SWOT analýzu pro zhodnocení jednotlivých regionů.

Vývoj tématu od zadání projektu do odevzdání práce (max. 10 řádek):

Práce se od zadání tématu razantně vyvinula. Nejprve bylo cílem zkoumat především regionální rozdíly Mexika, ale ukázalo se, že v tomto hledisku už bylo výzkumu provedeno dostatek. Poté se tedy práce přeorientovala spíše na regionální rozvoj regionů s tím, že velká část byla věnovaná teoretickému základu. Ten se několikrát změnil, jak se postupně více upřesňovaly různé teorie spojené s regionálním rozvojem.

Struktura práce (hlavní kapitoly obsahu):

Introduction

Literature Review

Methodology

Defining Regions

Data Analysis

Physical Capital

Human Capital

Innovation, Research and Technology

Federal Governmental Approach

The SWOT Analysis

The North

The Centre

The South

Conclusion

Hlavní výsledky práce (max. 10 řádek): Práce ukazuje několik základních trendů, které se v uvedených 3 regionech odehrávají. Dochází k závěru, že Sever jako region se nachází v nejlepší hospodářské situaci, což je důsledek manufakturního průmyslu zaměřeného na export. Tento region těží ze své blízkosti k USA, ale důsledkem nadměrného propojení je na Severu absence technologického výzkumu pro další rozvoj produktů – k tomu dochází v USA. Centrum také zažívá hospodářský růst. Většina ekonomické aktivity se odehrává v okolí Mexico City, ale Centru se podařilo vytvořit několik dalších clusterů i v jiných svých regionech. Poslední region, Jih, je z daných regionů ten nejrozmanitější, avšak postrádá hospodářský růst. Jeho ekonomika je založená na ropě, turismu a zemědělství. Nachází se v něm jak hospodářsky rostoucí mexické státy, tak státy v bludném kruhu chudoby.		
Prameny a literatura (výběr nejpodstatnějších): Banco de México. https://www.banxico.org.mx/ Consejo Nacional de Población (CONAPO). http://www.conapo.gob.mx/es/CONAPO/Tabulados_basicos Instituto Nacional de Estadística, Geografía e Informática (INEGI), Banco de Información Económica. https://www.inegi.org.mx/sistemas/bie/?idserPadre=10200070#D10200070 México, Cómo Vamos? (COMOVAMOS). https://www.mexicocomovamos.mx/ Blažek, Jiří, and David Uhlíř. Teorie regionálního rozvoje, (Praha: Karolinum, 2002). Capello, Roberta, and Peter Nijkamp. Handbook of Regional Growth and Development Theories (Cheltenham: Edward Elgar Publishing, 2010). OECD, Estudios de la OCDE de Innovación Regional: 15 estados Mexicanos, OECD 2009. https://doi.org/10.1787/9789264060906-es Viesti, Gianfranco. Diagnóstico de desarrollo regional: México, (EUROSociAL, no. 13, Madrid 2015) http://sia.eurosociasocial-ii.eu/files/docs/1437654618-E-13(espanol)MX.pdf		
Etika výzkumu:**		
Jazyk práce: anglický jazyk		
Podpis studenta a datum Markéta Moravcová 30. 7. 2020		
Schváleno	Datum	Podpis
Vedoucí práce		
Vedoucí diplomového semináře		
Vedoucí specializace		
Garant programu		

* BAS – Balkánská a středoevropská studia; ES – Evropská studia; NRS – Německá a rakouská studia; RES – Ruská a eurasijská studia; SAS – Severoamerická studia; ZES – Západoevropská studia.

** Pokud je to relevantní, tj. vyžaduje to charakter výzkumu (nebo jeho zadavatel), data, s nimiž pracujete, nebo osobní bezpečnost vaše či dalších účastníků výzkumu, vysvětlíte, jak zajistíte dodržení, resp. splnění těchto etických aspektů výzkumu: 1) informovaný souhlas s účastí na výzkumu, 2) dobrovolná účast na výzkumu, 3) důvěrnost a anonymita zdrojů, 4) bezpečný výzkum (nikomu nevznikne újma).