

## ECONOMIC GLOBALIZATION AND ITS IMPACTS ON CLUSTERING

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*The purpose of this study is to review globalization literature and cluster literature to see how these two phenomena are understood, which perspective scholars refer to when analysing globalization and clusters, how can the approaches explain each other. The attention was focused more on the outcomes of globalization for the countries that are a part of the ongoing process rather than theoretical aspects, while cluster literature was chosen to address globalization and the attempt was to see the links between these phenomena. Bibliometrical analysis is used for the purpose, articles selected from the Emerald Insight database. The findings suggest that the main concern caused by globalization is inequality of income and wage which can be reduced by education for people can gain skills and knowledge which would make them competitive in demanding environment. Competitiveness is emphasized in cluster definition and the processes of globalization are seen as advantageous for cluster development. This literature review needs further analysis with more articles taken into consideration. The concept is advanced and developed, so there are many studies made regarding this topic. In this paper a certain aspect is observed to see how far the concept has advanced and how scholars view it.*

**Keywords:** globalization; inequality; competition; cluster; world society; education; global market

**JEL classification:** F63

## ЭКОНОМИЧЕСКАЯ ГЛОБАЛИЗАЦИЯ И ЕЕ ВЛИЯНИЕ НА РАЗВИТИЕ КЛАСТЕРОВ

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*Цель данного исследования – провести обзор литературы, посвященной процессам глобализации и кластеризации, чтобы продемонстрировать понимание данных феноменов, а также того, какой теоретической позиции придерживаются ученые, анализируя данные процессы, и как эти подходы объясняют друг друга. Внимание бло сфокусировано главным образом на результатах и последствиях глобализации для стран, активно вовлеченных в развивающийся процесс, а не теоретическим аспектам, в то время как литература, посвященная процессам кластеризации, была подобрана таким образом, чтобы осветить глобализацию. При этом авторы попытались взглянуть связи между данными феноменами. Для достижения данной цели был использован библиометрический анализ статей, содержащихся в базе даны «Emerald Insight». Результаты исследования свидетельствуют о том, что основная проблема, порожденная процессом глобализации, – неравенство доходов и заработной платы, которые может быть уменьшено в результате получения образования людьми, развития их навыков и знаний, что повысило бы их конкурентоспособность. Конкурентоспособность – характеристика, подчеркиваемая в рамках определения кластера, а процессы глобализации рассматриваются как благоприятствующие развитию кластеров. Проведенный литобзор нуждается в дальнейшем анализе, который бы охватил большее количество статей. Рассмотренные концепции являются довольно проработанными, так что релевантных исследований можно найти множество. Данная статья посвящена определенному аспекту рассматриваемой тематике, и проливает свет на степень развития анализируемых концепций, а также представлениям ученых о них.*

**Ключевые слова:** глобализация; неравенство; конкуренция; кластер; мировое сообщество; образование; глобальный рынок

### **Introduction**

The term globalization became famous and widely used since the second half of twentieth century in different social and scientific areas. It is generally understood that we live in a global world. The most of contemporary theorists agree that globalization is related to fundamental changes of space, distance, time and social existence, which are as significant as those of people activity and relationship. However, the globalization term is not clearly defined and its content is more anticipated than clearly perceptible, which enables to state that globalization cannot be seen as scientific notion, reflecting aspects of reality (Urbsiene, 2011; Abrhám et al., 2015).

Globalization as a phenomenon was perceived through international integration of commodity markets when the prices of transport costs were lowered and the trade barriers were lifted in Europe. Later, countries started integration in the world economy through the world trade. The next stage is shifting from trade in final goods to trade in intermediate inputs and bussiness services (Dumont et al., 2011; Lisin & Strielkowski, 2014).

Dynamic environments have changed competition among companies as it has increased and knowledge that can be created within organizations became the source of

competitive advantage instead of material resources (Martínez, 2012; Tvaronavičienė et al., 2015b; Čábelková et al., 2015; Strielkowski & Lisin, 2016; Simionescu et al., 2017; Traversari et al., 2017; Ahmed et al., 2017; Crosbie et al., 2017; Mouraud et al., 2017; Barberis et al., 2017; Passerini et al., 2017; Gandini et al., 2017; García-Fuentes & de Torre, 2017; Perfido et al., 2017; Oates et al., 2017; Daher et al., 2017; Lynch et al., 2017; Laužikas et al., 2017; Štililis et al., 2016; Kiškis et al., 2016; Tvaronavičienė et al., 2016; Allabouche et al., 2016; Tvaronavičienė, 2016; Pauceanu, 2016; Rezk et al., 2016; Samašonok et al., 2016; Raudeliūnienė et al., 2016; Prause, 2016; Gerlitz, 2016; Zemlickiene et al., 2017; Ignatavičius et al., 2015; Tvaronavičienė & Černevičiūtė, J., 2015).

The effectiveness of a cluster is supposed to be increased by facilitating the transmission of knowledge and the development of institutions, which can be achieved through geographical proximity (Glazar & Strielkowski, 2010; or Tvaronavičienė et al., 2015a). However, globalization processes does not allow clusters to concentrate only on regional development for the most dynamic environments affect isolated communities involving them in world economy.

The number of case analysis and other kind of scientific cluster analysis in various contexts and different countries show the importance of the subject. Competitiveness is often emphasized in cluster studies for this advantage is viewed as one of the most important for companies in clusters. As clusters are usually formed regarding geographical proximity and are valuable in regional development for their interest in innovations, R&D, start-ups and other means, they can become competitive in global market.

The purpose of this study is to review globalization literature and cluster literature to see how these two phenomena are understood, which perspective scholars refer to when analysing globalization and clusters, how can the approaches explain each other. Further analysis should follow this study, taking more articles and authors into consideration looking for clear linkages between globalization and cluster analyses. Bibliometrical analysis was applied and Emerald Insight database was chosen to serve the purpose. At the beginning of the study the concept of globalization was determined and different approaches towards the notion were collected. Later, the concept of clusters was taken into consideration aiming at different views to be addressed. The third stage was combined to see how clusters study can be related to globalization study. The attempt was to explain if clusters can avoid or eliminate the threats of globalization process, if there are some, and to benefit from this phenomenon.

The article is structured as follows. In the second section there is a description of the research design and the method of data collection. The third section gives literature review of globalization. The fourth section shows the observations on cluster theory. The fifth section provides the results of globalization and cluster theory analysis. The last section incorporates the conclusive remarks.

### **Data and methodology**

Emerald Insight database was chosen as the source of scientific literature for it contains articles, research papers, chapter items, other scientific disciplines in various fields. The scientific data is continuously supplemented. However, the limitations of this literature review is that only 7 articles were chosen dating from 2009 to 2016 by the key word globalization and 8 articles dating from 2010 to 2016 by the key word cluster and which are analysing clusters in globalization or internationalization context. The attention was not paid to the citation index, time perspective was more important, aiming at the alternatives that are being analysed during longer period of time.

Bibliometrical analysis was carried out, the main concern of the authors was highlighted and notable observations were indicated. The articles were composed in chronological order to see if the main concern is changing over time. Globalization literature and clusters literature in globalization context were analysed separately and the findings fol-

low the analysis. The authors summarize the observations that were found in articles and provide suggestions how these two subjects interact together.

### Approaches towards globalization

There are numerous articles about globalization which shows the importance of the discussed matter. Authors rely on different opinions and provide various scenarios for the processes involving businesses, cultures, organizations and individuals. Table 1 is formed to revise the observations of scholars and to see if attitude towards globalization is changing and what are the main aspects that authors emphasize when referring to globalization.

**Table 1. Approaches towards globalization**

Authors	Main concern	Notable observations
Paliwoda & Slater, 2009	Liberalization and free trade	The opinion about globalization as being responsible for overcoming poverty and failing in this task and should not be operating anymore for this reason was mentioned in this paper. Globalization was defended for there are many studies giving proofs that the process is active and can be ascribed to the repetition of economic cycles.
Cuyvers et al., 2011	Impact on labour markets	Globalization has positive effect on regional and labour policies for local governments must take into consideration existing policies and amend them so that labour rights and migrant workers' rights are followed. Workers are exposed to global market and they have to adjust to the requirements that are changing rapidly.
Ali, 2014	Inequalities	Economic globalization cannot suggest rapid economic gain for poor segments of the population. The poor can only move forward by having access to educational opportunities and improve their income status by using knowledge and skills. Global capitalism that prevails makes inequality the norm of life.
Wittmann, 2014	Globalization and world society	Topics, such as global inequality, transnational citizenship and global justice are seen as important for future perception as they are innovative and may become highly studied. These topics displace nation-state-oriented frame of reference for research and should gain more attention when referring to globalization and its effects.
Cheng et al., 2015	Interaction between R&D and production	Globalisation has an impact on decision making and factors such as international culture, administration, geographical challenges and economic situation should be taken into consideration. Also, internal factors such as company culture and organization should not be left out when referring to decisions closely connected to globalization.
Raport, 2016	Migration	Globalization is viewed as having significantly positive effect for people can freely move to another country with their skills and knowledge. Brain drain is downweighted with brain gain, viewing migration as an outcome of globalization which can help nations in sharing resources and having profit from such movement.
Srikantia, 2016	Structural violence	Former thriving and sustainable cultures are intervened by globalization and destroying them. Development and poverty are seen as notions that are used to cover the ideological implication of the processes that are destroying communities around the globe. It is suggested that globalization seeks for benefit and make damage to culture.

**Source:** *Own results*

Cheng et al. (2015) in the work "Exploring the interaction between R&D and production in their globalization" refer to globalization as a process, having a growing impact on business organization and practice. Scholars see the world changed permanently by global trade and foreign direct investment. The case study was employed to discuss on globalization from production to R&D. The paper is designed to explore how R&D and production interact with each other in their globalization processes as there is a literature gap concerning the interrelationship between global production and R&D. There were three approaches identified, which are followed by case companies to globalize their production and R&D: interactive globalization, separated globalization and a possible combination.

Interactive globalization can be viewed as a long-term, stepwise, expansive, iterative and interactive process. The term separated globalization describes the interdependence of R&D and production in their globalization as distributed by following different rationales, and basically without any communication between them. A company has the potential to follow a combined approach to globalize its research, development and production when it globalizes its research independently in different countries, while globalizing its production and development interactively in another country. Existing internationalization theories rarely address dispersion of global R&D activities, which is taken into consideration in this paper as well.

The emphasis here is put on the process itself of connecting R&D and production. This paper does not give an opinion of how it can affect inequality, although factors that must be taken into consideration as crucial in decision making are mentioned. These are international culture, administration, geographical challenges and economic situation. Rather than judging globalization for poverty, in this paper we only can see it as a considerable unit that is important for R&D and production development.

Wittmann (2014) illustrate discourses on globalization and world society in the paper "World society and globalisation", as well as disclose the commonalities and differences of both scientific debates. Theoretical concepts of globalization and world society are discussed in particular. Globalization can be classified into the following dimensions, regarding socio-scientific disciplines: economy, sociology, political science, cultural sciences, and criticism on globalization. Economy is often perceived for world economy by various researchers and it is seen as an area which functions as the driving force of globalization. The topics of world society and globalization are directly linked to each other for the processes of globalization inspired scientists to discuss global processes of socialization and social interactions, as well as worldwide existing social phenomena like poverty and social inequalities in a global context. In contemporary times, analyses of the political structure cannot assume nation-state models as the reclusively effective criterion of the political scenery. Cultural heritage stands for a heritage of cultural artefacts in globalization context for monuments or oral traditions have to be conserved for the whole of humanity. This classification allows having a general picture of globalization and the fields which it affects. Possible presumptions can be made regarding the aspects which are noticed by the author.

This classification enables further analyses and help to focus attention on themes that are the most important in terms of globalization. It also shows all the fields that are included into terms globalization and world society but does not show what effect they have on the specific topic that is considered in this paper.

Rapoport (2016) emphasizes the significance of the "migration" component of globalization as it has long been seen either as a safety net (allowing to export one's demographic surplus and receive insurance income from remittances) or as a threat (in the case of brain drain) for developing countries. In particular, in the light of recent empirical evidence, the role of migration and diaspora networks must be considered as a potentially significant generator of brain gain.

Access to foreign markets, sources of foreign investments, and global knowledge networks are essential ingredients to the growth and development prospects of low and middle-income countries. This is precisely what migrants – and skilled migrants in particular – bring about. Migration and diaspora networks are a major component of the economic integration of developing countries into the global market. As transaction costs, risk premium, and information imperfections are particularly prevalent in developing countries, the positive effects of diaspora networks can be crucial in overcoming these challenges. Thus, it is important to recognize these externalities to be able to exploit them.

Skilled migrants are referred in the study and the positive effects are naturally assigned to globalization as migration helps in different aspects. The question is how it can

help to overcome poverty. This theme is left out mostly emphasizing migration as beneficial for possible sharing of resources, skills and knowledge.

Globalization is viewed through liberalization and free trade by Paliwoda and Slater (2009). It was seen as to overcome poverty but it failed at this target. However, there are aspects that characterize globalization. First of all, market economy is the only that can generate prosperity. Goods should be supplied as needed by consumers. The second aspect is that individual states should be responsible for the political debate and legitimacy within the state, leaving the international questions for supranational institutions. Third, international treaties of the common good should be participated in by nations and their citizens for the benefits that they can give. Fourth, the importance of international treaties is emphasized as they need to be specific, focused and enforceable. Fifth, the WTO (World Trade Organization) should be looked through and returned to its original mandate. Sixth, investment and global competition has acquired higher standards, which is good in general level. Seventh, global financial markets require long-term integration by nations to be competitive. Eighth, a global lender of last resort is required. Ninth, Western governments should provide official development assistance but not infringe the responsibilities of governments which are receiving the assistance. Tenth, countries are obliged to learn from their own mistakes, although, the global community has to be ready to show their concern if states have failed and help them to straighten. Finally, the benefits of globalization outweigh the threats and should lead to long-term increase of skilled employment and rise in lower skilled unemployment.

Cuyvers et al. (2011) view globalization and its consequences for income and wage inequality through two conflicting tendencies, which are "compensation" and "efficiency". There are two different sides emphasized, one is that globalization may increase the risk of unemployment and income inequality, which require the demand for more government intervention through labor protection or income redistribution, while the other is the constraints for governments' intervention capacity in the economy because of increased capital mobility or import competition. The potential solution for the second problem could be international (and regional) co-ordination in labor market policy. Hence, workers are exposed to global economy where they are made to be dynamic with their employment and wages as to be competitive in global market, mobile in sector and geographically at the same time. It is also suggested that labor standards were deviated by globalization, but this presumption is not fully performed. As to summarize, globalization challenges national socio-economic policies as well as labor policies for global economic dynamics are deviating national jurisdiction and policy spaces by causing problems characteristic to our age.

Ali (2014) analyses the relationship of globalization and inequalities. While capitalism and global capitalism system is enhanced by the rise of globalization and should have created new economic opportunities for millions of people, the benefits from and access to these opportunities differs across advanced and developing countries. It is stated that the most prosperous people have gained the most from the government programs which were designed to raise the economy by employing economic stimulus and rescue packages. People with the greatest income have government in their favor through the connection with the power elite and policy makers and the access to the professionals who can manipulate the system and get the most from government programs. In the rise of economy, people with higher income regain their power while the poor cannot get advantage as they do not have any experience. Difference can be seen of lower income people with skills gained through training and education as they have the opportunity to be socially mobile and professionally competitive. Developing countries show a different tendency, where people with lower and higher income have equal opportunities to compete in a global market and get advantage from globalization by seizing new opportunities. It is emphasized that the poor do not experience rapid economic growth from economic globalization both in ad-

vanced and developing countries. The only suggested way for poor to improve their status is through education. Inequality is perceived as a norm of life in global capitalism.

The structural violence of globalization is discussed by Srikantia (2016) for it threatens sustainable communities through interacting institutions, processes of globalization and economic development. The paper suggests the ways of dealing with this threat. It is suggested that structural violence and our complicity in it should be recognized, then our ways of life should be re-localized in a way that do not cause structural violence, later specific instances of violence against communities should be prevented and work for operative system level rules to be transformed as not create structurally violent relations. Theory and practice requires prevention of structural violence instead of treatment of its negative consequences in the age of globalization. Experts can help the impacted and threatened communities by consulting them and suggesting the transformations needed. The functioning of globalization depends on structural violence and it is claimed that our responsibility is to become aware of the nature and dynamics of this system and to be ready to transform it. The transformation of global structural violence requires commitment to genuine solidarity with communities threatened by it. It involves not only respond to the needs which are expressed but also transformation of structurally violent system. This can be done through applying the actions mentioned at the beginning of the paragraph.

Globalization affects society in everyday life and creates environment which can be used for economy development by using its competitive advantage. Companies can make goods which are attractive for worldwide audience and sell them in international environment. Global production interacts with R&D in different aspects. This helps companies to become competitive. The term globalization is discussed in different concepts. These are economy, sociology, political science, cultural sciences, and criticism on globalization. Possible presumptions can be made regarding the aspects which are noticed.

Globalization can be viewed through liberalization and free trade. Different authors emphasize poverty as a target of globalization. Some authors state that globalization failed at overcoming poverty. Others claim that globalization is the consequence for income and wage inequality. Inequality is even perceived as a norm of life in global capitalism and education is the only mean that can reduce the poverty. Another threat is identified as structural violence. The functioning of globalization depends on structural violence and it is claimed that our responsibility is to become aware of the nature and dynamics of this system and to be ready to transform it. The benefits of globalization outweigh the threats and should lead to long-term increase of skilled employment and rise in lower skilled unemployment.

### **Clusters in terms of globalization**

The evolution of the global economy and improved access to goods and resources from distant locations has placed knowledge at the core of firms' competitive advantages (Zander & Kogut, 1995; Jensen & Szulanski, 2007; Sala-I-Martin et al., 2012).

The strengthening of competition resulting from the globalization of the economy and the emergence of new players on the international stage have forced MNEs to extend their network of subsidiaries to tap into the specific profile of different types of environments (Ketels, 2008). Because MNEs have the ability to internalize the benefits of the geographic dispersion of activities, they can significantly improve their competitive advantages by spreading their activities across locations and taking advantage of the specificities of different business environments (Gugler, 2015).

Competitiveness is highly emphasized in global environments as it has increased radically since companies started using knowledge that is created within organizations as a source of competitive advantage instead of material resources. The effect of clustering is interesting for scholars as it can be studied on different levels, such as individual companies, regions or nations. Since the 1990s a large number of cluster organizations have been

formed as public–private partnerships which aimed at promoting the growth and competitiveness of clusters. Even the concept of collective efficiency can be used in order to help in understanding how companies in cluster achieve higher performance or benefit from co-operation. In long run clusters expose the main feature, which is increased competence of an organization within cluster and this feature enables companies to achieve competitive advantage in global markets.

Literature analysis given in Table 2 reveals the attitudes towards clusters in globalization context. Authors concentrate on various matters but most of them agree that globalization is unavoidable and companies in clusters can benefit from that. Some authors even emphasise the importance of globalization for companies in clusters founded in developing countries for a single unit can involve other companies belonging to cluster into beneficial processes and converge in world economy.

**Table 2. Approaches towards clusters**

Author	Main concern	Notable observations
Evers et al., 2010	Cooperation of companies on global scale	The negation of location is supported by cooperation of companies on global scale and outsourcing parts of their administrative or productive units for they make geographical proximity or distance devalued.
Andersen & Bøllingtoft, 2011	Localized knowledge changes its significance	Clusters are based on knowledge sharing and learning on local basis. Globalization has forced clusters to turn themselves from reservoirs to learning infrastructures or knowledge hubs in global network of production, development and marketing activities.
Lee et al., 2012	Opportunities for global competition	Globalization is seen as an opportunity for developing countries, companies in smaller countries for they get access to global markets. It important to recognize insufficiencies and potential weaknesses and promote the development of regional clusters to build up competences and competitive advantages of companies by sharing resources, innovative capabilities and knowledge against world's best competitors.
Zombori, 2012	Prolongation, penetration and integration; "springboard mechanism"	Three stages of network development are associated with the internationalization. They can be experienced by cluster companies which engage other members until the whole cluster is involved. The notion of psychological distance can be applied in a larger scale, not only companies but also clusters.
Colovic & Lamotte, 2014	Networks are important in the internationalization of entrepreneurial companies	Local ties are very important for the transfer of tacit knowledge for the information can be received by local actors automatically. However, local ties are often complemented by global ties, which allow companies to reach world markets through wider sources of information, codified, external knowledge.
Hammervoll et al., 2014	Ties between geographical proximity and knowledge	Globalization gives access to knowledge outside the cluster. Local tacit knowledge is combined with global explicit knowledge accessed to global linkages. Value networks that used to be confined within the cluster now became dispersed and this may be viewed as a threat for it may undermine the relational for of cooperation.
Cheng et al., 2015	Multinational companies benefit from geographically dispersed activities	Multinational companies and clusters have a self-reinforcing relationship in the global innovation process. While, clusters are focused on local learning, knowledge and innovations, multinational companies tend to get this specific knowledge through investments by giving an opportunity to clusters to access explicit knowledge.
Jankowska & Glowka, 2016	Competitive advantage on larger scale (international)	Clusters function is to build a competitive advantage for cluster members internationally even though they are characteristic to local or regional markets. It is considered in innovation-related models that internationalization is an innovatory activity.

**Source:** Own results

As can be summarized from the scholars discussed above, companies in clusters use competitive advantages of common pool of resources, information transfer, R&D, innova-



tions and start-ups. The access to these additional sources enables companies to compete in globalized world starting with their region and expanding further into international markets. Clustered companies can have their activity developed through sharing the expenses of projects that can help their business move forward with other companies within cluster. In this way, clusters enable companies to become global.

### **The possibilities of cluster study in globalization context**

Companies today experience many challenges as well as meet the opportunities because of globalization and the continuing technological revolution. The lack of domestic market necessary for companies to grow in smaller countries and weaker infrastructures as well as limited support industries for companies in developing countries are proves of the idea stated before. The development of regional clusters was promoted in many countries where companies are able to build up their competencies and competitive advantages against the world's best competitors by sharing resources, innovative capabilities and knowledge after the insufficiencies and potential weaknesses were recognized.

The value of clusters in developing advanced technological products and services as well as promoting regional growth is acknowledged by many policy makers and researchers. The aim of companies is to enhance competencies and create competitive advantages in global competition and this can be achieved through pulling from a common and accessible pool of resources, information and demand for innovation which means that companies can profit from belonging to a cluster. However, it may be difficult to develop a successful cluster in many regions or countries.

Research on clusters gained its popularity in various academic fields such as management and strategy, regional development and growth, urban studies and economic geography since 1990. Today we encounter many well-developed clusters which demonstrate significant competitive advantages for the companies in the cluster and strong performance for the region. However, the successful development of a cluster may be rather challenging.

Competition is the main feature which is highly emphasized in cluster formation in global context. It is the driving force of healthy economics, dealing with all the other features which are important for companies to work successfully in rapidly changing environments. Cluster studies can be a useful pool of information for policy makers as well as company managers in helping companies to gain a competitive advantage and get great success in global markets. The study shows that clusters are encouraged to become competitive and be able to take part in global market.

Globalization theory gives us a picture that the process may be responsible for intensifying the problem of inequality. However, the next section were prominence was put on cluster theory gives us a rather promising sequence with additional explicit knowledge, which adds to regional information. Finally, the stages of network development that are defined to be characteristic to internationalization can be related to inequality. Hence, involved member engages other members and the whole unit is present in the same activities or processes.

### **Overview of main findings**

Since the second half of 20<sup>th</sup> century the term „globalization“ became famous and widely used in different social and scientific areas. It is widely accepted that globalization is related to fundamental changes of space, distance, time and social existence, which are as significant as those of people activity and relationship. Organizational forms reflect differences in strategic thinking with less uniformity being necessary or imposed. Individuals today recount their daily tasks in terms of using the names of global brands or products as nouns and verbs in everyday language. Thus, globalization continues to evolve.

Some scholars refer to globalization in two ways. First, they view globalization as a single indicator, such as international trade in goods and services or foreign direct investments. Second, the spatial scope of globalization, which often is overestimated as the

reach of commercial, and investment activities is often more regional than global. The global economic system should perhaps be better understood as a hierarchical and/or overlapping combination of subsystems.

Access to foreign markets, sources of foreign investments, and global knowledge networks are essential ingredients to the growth and development prospects of low and middle-income countries. These are the main issues that companies in clusters aim at. Clusters represent a complex form of organization, in which social ties (the community), productive networks of local firms, and the web of local institutions and collective agents form a co-operative and competitive density. Clusters are a characteristic phenomenon in local or regional markets, but their function is to build a competitive advantage for cluster members on a larger scale – not only national but international.

Companies today experience many challenges as well as meet the opportunities because of globalization and the continuing technological revolution. The aim of companies is to enhance competencies and create competitive advantages in global competition and this can be achieved through pulling from a common and accessible pool of resources, information and demand for innovation which means that companies can profit from belonging to a cluster. Cluster studies can be a useful pool of information for policy makers as well as company managers in helping companies to gain a competitive advantage and get great success in globalized markets.

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