Political Change and Urban Growth in a Medium-sized Outer Island Capital in Indonesia: The Case of Palu, Central Sulawesi

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Submitted by Sammy Al Idrus

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Thesis Committee: (Name, Abteilung/Arbeitsgruppe, Institution)

Prof. Dr. Heiko Faust, Human Geography, Geographisches Institut Göttingen

Prof. Dr. Christoph Dittrich, Human Geography, Geographisches Institut Göttingen

Members of the Examination Board (Name, Abteilung/Arbeitsgruppe, Institution)

1. Reviewer: Prof. Dr. Heiko Faust, Institute of Geography, Department of Human

Geography, University of Göttingen

2. Second Reviewer: Prof. Dr. Christoph Dittrich, Institute of Geography, Department of

Human Geography, University of Göttingen

Further members of the Examination Board: Name, Abteilung/Arbeitsgruppe,

Institution)

1. Prof. Dr. Daniela Sauer, Institute of Geography, Department of Physical

Geography, University of Göttingen

2. Dr. Jonas Hein, Senior Researcher at German Institute of Development and

Sustainability (IDOS)

3. Dr. Miriam Wenner, Institute of Geography, Division of Human Geography,

University of Göttingen

4. Dr. Stefan Erasmi, Thünen-Institut Braunschweig, Institut für Betriebswirtschaft

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Sammy Al Idrus

Georg-August University School of Science (GAUSS)

Abstract

Purpose: This study examines how Palu's urban development was affected by centralization and subsequent decentralization policies as well as how these shaped the local government and society. This study also explores local government and resident responses and adaptations following the 2018 earthquake and tsunami that destroyed large parts of Palu.

Design/methodology/approach: The author demonstrates how political changes affected urban growth in a medium-sized city of Indonesia's periphery by using Palu, the provincial capital of Central Sulawesi as a case study. Time series data covering the centralization and decentralization eras were used for the qualitative analysis, and interviews were conducted with residents, politicians, and academics.

Findings: The author argues that, in the case of Palu, the political shift from centralization to decentralization resulted in extensive changes in the urban fabric of Palu, especially in terms of its growth in area, population, and economy. Although decentralization has the potential to solve many local problems, current local institutions are not in accordance with the needs and requirements of citizens to realize effective local governance in managing a medium-sized city. This is especially true for the management of the natural disaster in 2018.

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1. Introduction

1.1 Background

Cities, as places of knowledge and creativity, are the driving forces behind economic and social development and their importance in this regard is continually increasing. The dynamism of cities represents a major sustainable development opportunity. With excellent urban development management, cities can create jobs and offer better livelihoods, increase living standards, improve social inclusion, promote the decoupling of economic growth from environmental resource use, protect local and regional ecosystems, drastically reduce pollution, and reduce both urban and rural poverty (UN HABITAT, 2013). By committing to sustainable economic growth, urban development is fundamental in the fight against poverty. Economic growth can reduce poverty by generating employment and increasing incomes, especially when linked to more labor-intensive activities (ASIAN DEVELOPMENT BANK, 2004).

Development of the city is indeed very important. Urban development is not just developing the city and increasing the size, population, and the economy to a broader level such as from a Medium-sized city to a mega city, but rather optimizing the efficiency of land, meeting the needs of continuously growing society, and constructing sustainable and orderly urban infrastructure and facilities.

Mistakes made in managing development and urban growth are very hard to revert. Infrastructure investments, urban land use systems, and city planning are fixed with impacts that may be difficult to alter for many decades. Without capable management and investments, marginal settlement may expand and cities may fail to generate the jobs necessary to improve livelihoods. Therefore, inequalities, exclusion, and violence may increase within urban areas. Furthermore, cities may fail to decouple economic development from resource use and they may fail to provide economic opportunities to surrounding rural areas. Finally, mismanaged cities can become vulnerable to climate change and other environmental alterations.

Urban areas have considerably expanded over the past decades, but they neither grow uniformly nor at the same rate. Standard deviation of the growth rates of cities naturally poses the question why some cities keep growing even after countries are already highly urbanized and why some cities grow faster than others (GILLES & PUGA, 2013). One thing to consider is, depending on the size of a city, the development process is different. It is generally believed that large cities, with populations between 500.000 – 1.000.000 inhabitants, have grown faster than small and medium-sized cities. However, evidence shows that small and medium-sized cities grow faster on average (RAKESH, 2004).

Medium-sized cities have emerged with the potential to bring an inclusive economic future that bridges the urban-rural divide. Medium-sized cities are very important because they promote interdisciplinarity and can act as connectors between industries, knowledge domains, and various actors. Medium-sized cities with populations between 100.000 – 500.000 inhabitants (KORIN, 2013) have become a major focus of discussion in relation to global urbanization as they gain prominence in terms of strategic, locational, and distributional function and accommodate the largest proportion of the total urban population (HABITAT III, 2016; UN-HABITAT, 2016). Medium-sized cities will continue to experience rapid urbanization in the next decades due to their key role in transferring economic and social capital between urban and rural areas (McCarney, 2003). Therefore, the management of medium-sized cities should be undertaken with precaution and diligence so as to not replicate the problems that often occur in large cities.

Over the last 50 years, developing countries have seen a rapid increase in population, particularly in Asia, the world's most populous region (UN-HABITAT, 2016). In terms of urbanization, Asia has the highest proportion of urban growth and it is expected that this trend will continue over the next 30 years with major contributors, including Indonesia, India, and China (UN-HABITAT, 2016). Indonesia is predicted to be among the world's leading countries in the next decade in terms of economic growth, development, and international affairs (UNDP, 2015). According to the World Bank (2018), Indonesia

has a respectable economic growth rate of 5 to 6%. Indonesia has experienced rapid urban population growth in the past decade. The population reached 276,361,788 million people in 2021 (WORLD BANK, 2021) and it is projected to be close to 305.6 million by 2035 (BPS, BAPPENAS & UNFPA, 2014).

The population distribution in Indonesia is highly uneven, with roughly 60% of the population concentrated in Java Province, which comprises about 7% of the total land area (NINIK & JONES, 2019). Compared to the total population of 203.4 million in 2000, this represents an increase of approximately 35 million people in ten years, constituting a growth rate of 1.49%. The three factors that caused urbanization in Indonesia are: (1) natural population growth (35-40%), (2) rural-urban migration (25-30%) and (3) the reclassification of rural areas into urban areas (30-40%) (Mulyana, 2014).

The 1998 Asian economic crisis resulted in slowed urban growth, sharp increases in unemployment, and uncertain political situations in many Asian countries. Along with this change, the Indonesian government implemented a new regulation to aid in the recovery from the crisis. The government implemented regional autonomy and decentralization policies, which contributed to a shift in urban development patterns away from the megacities of Java island and toward smaller and less populated regions throughout Indonesia (FIRMAN, 2004). Previously centralized and hierarchical government policies of Indonesia have been attributed to the rapid agglomeration and polarization in cities on Java Island (Jones & VISARIA, 1997).

The newly implemented government systems granted local governments in small and medium-sized cities the capacity to increase investments in urban public services and infrastructures which were previously solely controlled by the central government. Since the Indonesian government introduced a decentralized system in 1999 (autonomy), the economy was no longer concentrated in big cities like Jakarta, Surabaya, or Medan, but spread throughout many regions. This also delegated governance resources and responsibilities from the main cities in Java to smaller cities and their local governments outside Java Province. Nothing has transformed the scales of interaction within and

between Indonesian cities and the outside world over recent years more than decentralization. As noted earlier, Indonesian cities and regencies were the primary beneficiaries of regional autonomy; among these benefits was the acceleration of development and city growth (MILLER, 2013).

Hence, Indonesia has experienced a rapid growth of medium-sized cities. Before autonomy, a mega city like Jakarta, Surabaya, and Bandung had driven rapid urbanization and urban growth on Java Island and skewed Indonesia's spatial pattern of urbanization (FIRMAN, 2012). Spatially, the patterns of Indonesia's urbanization process have been highly uneven with profound consequences for decentralization. In 2000, some 60% of Indonesia's population lived on the island of Java while the remaining 40% were scattered across the archipelago's 70,000 islands (BPS, 2010). With more than half of the national population (over 121 million people) inhabiting Indonesia's fourth-largest island, urban density in Java occurs on a scale not replicated anywhere else in the country. At the same time, towns and intermediate cities in Indonesia's outer islands have experienced higher population growth than Java over recent years, which may be related to increasing economic opportunities and urban development through decentralization (FIRMAN, 2016). Recently, medium-sized cities have been leading the urbanization process outside of Java Island, playing an increasing role in terms of economic transformation and spatial development (FIRMAN, 20016).

The symptoms of rapid urban growth that occurred in many medium-sized cities in Indonesia likewise took place in Palu. Palu is a city in the eastern part of Indonesia which is the capital of Central Sulawesi Province. For instance, it exhibited an urban population growth above the national average during the past decade (BPS, 2012). The population growth in Palu was 4.98% and 2.94% above the national average from 1990–2000 and 2000–2010, respectively (BPS, 2012). Moreover, Palu is experiencing a rapid growth of informal settlements which encroach onto planned settlements and have reached 25% of the urban territory (AMMAR, 2017).

Prior to the decentralization era, privately owned commercial facilities dominated infrastructure in major cities such as Jakarta, Surabaya, and Medan, but cities (especially medium-sized cities outside Java) such as Palu proportionately had more government facilities. For many decades, the construction of urban facilities was solely focused on the city center and Palu's economy was largely driven by agriculture. A clear developmental shift only occurred after government decentralization in 1999, which triggered the physical expansion of the city outward and changed the use of agricultural land into suburbs.

After autonomy, the second stage of Palu's development took place. During this stage, the local government encouraged public—private partnerships in urban infrastructure development and tried to get the private sector involved in urban development projects, such as roads, hotels, new housing settlement, power plants, and water supply projects. At this time, Palu used its increased access to state funding to reposition itself as a new center of investment. This is why the autonomy fund represented a key opportunity for the development of Palu. The regional government now had the authority to regulate regional income and expenditure which was then widely used in infrastructure development. In addition, several local government policies encouraged investors to open businesses in Palu.

The economic activity that has grown rapidly since 2001 in Palu has generated new trade activities, hotels, restaurants, services, and small industries. These new economic activities that emerged in the last 20 years have formed a new center of activity and given rise to new settlements. This is why the continuous development of Palu is an interesting one to study, mainly due to its role as a transit town as well as the capital of Central Sulawesi Province, thus exhibiting various kinds of urban socio-economic activities. These can be observed in the city's existing pattern of development and intensity of urban land use and the construction of other urban facilities (HARAHAP, 2013).

September 28th 2018 marks the beginning of the most recent chapter of Palu's development. On this evening, when Palu was getting ready for its annual celebration

namely Palu Nomoni. Palu Nomoni is an event that introduces the original culture of Central Sulawesi, the earth shook under people's feet and the ground collapsed. An earthquake with a magnitude of 7.5 occurred, its epicenter located only 70 km way from the provincial capital of Palu. The earthquake caused liquefaction and a tsunami that consisted of three massive waves (measuring about 3m high) that smashed into the city, wrecking tens of thousands of homes, mosques, shops, and hotels. 2,081 fatalities were reported and more than 4,400 people suffered severe injuries (Kusumah, 2018). In addition, 206,494 people are currently displaced and 68,451 houses were damaged (BNPB, 2020). The National Disaster Management Authority (BNPB) estimates the total cost of material damages at US\$ 910 million. Five thousand people remain missing in the villages of Petobo and Balaroa, which were severely hit by liquefaction (BNPB, 2018). The occurrence of three natural disasters in such a short period of time was an unusual and traumatic experience for the people living in the region.

The destruction on September 28th is historically the worst Palu has ever seen. These natural disasters that occurred in Palu had many negative impacts apart from the immediate damage to various infrastructure: they interfered in Palu's economy and resulted in loss of life and trauma for many inhabitants. Economic downturn can drastically lead to increased societal stress levels, thus societal life in disaster-prone areas is subject to change. The disaster also altered some of the local government's policies related to land use and the rebuilding of infrastructure and its economy. The massive number of victims from the natural disasters in Palu prompted communities to reflect, understand, and learn about how disasters occur and what needs to be prepared before a disaster takes place. Even those who live in areas that are not affected by natural disasters indicate a need to learn about disaster mitigation and preparation (Wekke, 2019).

1.2 Research Gap, Research Objectives, and Research Questions

A medium-sized city influenced by a variety of scientific disciplines, technological advancements, and humanistic visions are highlighted, as well as the morphology, land

use, and various forms of socio-spatial interaction that occur within them. Our thinking, on the other hand, needs to be overhauled when it comes to medium-sized cities in emerging or developing countries, since these are the areas with the fastest population growth rates in general. Nonetheless, their municipal governments are the most affected by a lack of financial and human resources to anticipate and address these issues (UN-HABITAT, 2015).

There is less literature on the importance of medium-sized cities, particularly those in developing countries. In the beginning of 2000, the academic debate on small and medium-sized cities in developing countries centered on the general issues confronting smaller cities as well as those threatening their sustainability. One of the main concerns is that small and medium-sized cities lack the capacity to manage rapid urbanization in a sustainable manner (COHEN 2006; UN HABITAT 2006). Small and medium-sized cities, particularly in developing countries, have been impacted by the global urbanization process. Cohen (2006) contends that the issues confronting smaller cities are just as complex as those confronting metropolitan areas. Cohen's argument has two implications. First, it is intended to spark further research on small or intermediate cities in developing countries, as most of the attention and debate surrounding the global urban development process continues to focus on the largest cities, despite the fact that small and intermediate cities house the majority of the world's urban population. Second, it is a critical contribution to making efforts to address the major challenges that smaller cities in developing countries face.

Recently, the periphery of medium-sized cities has been affected by the urban growth process. The municipal area of the main nucleus corresponds to the central intermediate city's municipal area, and its peripheral urban area corresponds to the municipal terms that surround the central city. In recent years, there has been a significant urban expansion in these outlying municipalities (GóMEZ ET AL., 2019). Medium-sized cities will continue to grow rapidly over the next few decades. This rapid urban growth is posing economic, social, and environmental challenges for medium-sized cities,

which are particularly underprepared for the issues associated with this growth (GIZ, 2020). Some academics argue that the implementation of decentralization policies, particularly in small and medium-sized cities in developing countries, will reveal significant differences in how small cities manage the urbanization process (Liu, 2011). Satterthwaite (2001) argues that in the broader context of developing countries, the unexpected shift from centralization to decentralization over the last three decades has necessitated greater responsibility at the local level. Local regions have taken on responsibility for local issues, resulting in multifaceted connections among multiple stakeholders both locally and within higher levels of government.

The context, relational position, and capacity of medium sized-cities are the most important factors for urban management. As a result, the framework in this study is linked to two points:

- 1. The process of urban transformation in the era of centralization to decentralization, the challenges of rapid urbanization, and economic forces in medium-sized cities. Global urbanization, decentralization, and global economic forces have been identified as the primary challenges for small and medium-sized cities over the last three decades (WAGNER & GROWE, 2021). As a result, Palu must be able to respond to decentralization, rapid urban growth, rising urban population, and rising demand for urban infrastructure, while also remaining competitive in global and regional networks. Obviously, these issues necessitate collaboration within the city, as well as collaboration with other agencies and networks in the region.
- From a geographical standpoint, this study analyzes the development process
 of a medium-sized city with the influence of culture, regulatory frameworks,
 and capacity development on inter-local government collaboration involving
 medium-sized cities within the periphery of the decentralized nation of
 Indonesia.

Intermediate cities in Indonesia are undergoing rapid transformations as a result of the relatively recent decentralization policies. Furthermore, they are confronted with institutional challenges similar to those faced by Indonesia's large metropolitan cities (Miharja & Woltjer 2010; Firman 2008). Intermediate cities in Indonesia face intangible challenges, such as rapid physical growth and a lack of basic amenities, which are common issues in developing countries that impede social welfare.

This study investigated the process of urban transformation as it pertains to radical shifts in political systems, specifically from a centralized government to a decentralized one, and examined how these shifts can affect a medium-sized city in a developing country. The Province of Palu was selected as a case study for this purpose. Palu was chosen because the city and its surroundings are representative of medium-sized cities of developing countries and the issues they face. Furthermore, this study investigated the various impacts of the 2018 earthquake and tsunami that occurred during data collection in Palu.

This dissertation's main research objective is divided into four research questions: (1) How was the process of shifting the political system from a centralized to a decentralized one in Indonesia, (2) What was the impact of changing the government system on urban transformation in Palu? (3) How can Palu's development process be characterized in the era of centralization and decentralization, and what role did culture, government regulations, and the private sector play in the city's development? (4) How did the natural disaster of 2018 affect Palu and how did the government and people respond to the aftermath?

1.3 Structure

This dissertation is organized into six chapters. The first chapter describes the study's background, its position within the academic debate on medium-sized cities in developing countries, the objectives and research questions, and an overall outline of this thesis. The second chapter discusses the theoretical framework in order to effectively frame and answer the research questions. The third chapter describes the chosen

research methods and how they were used in this study. Methods for conducting research include research methods, case study selection, data collection, sampling, and data analysis. The fourth chapter presents the results obtained regarding the state of Palu during the eras of centralization and decentralization, as well as the state of Palu following the 2018 natural disaster. Subsequently, these results are discussed by providing interpretations and by comparing them with findings of prior studies in chapter five. The sixth and final chapter answers the main research questions as it contains a summary as well as reflections on the findings of the study. Furthermore, suggestions for future research on medium-sized cities are discussed.

2. Conceptual Approaches

2.1 The Role of Medium-Sized Cities in Regional Development

Cities have long attracted the attention of researchers and are widely studied in research from various disciplines, especially in urban geography and urban systems research. Development, spatial evolution, and spatial organization of urban forms are the dominant research themes in urban studies and human geography communities (FANG, 2017). However, the focus is mainly on major cities and metropolitan areas. Since the beginning of the 21st century, major cities and metropolitan areas have received special attention from various professions (KLAUSS, 2010). Big cities have benefited from research, conferences, and forums sponsored by academic institutions and other national organizations. Differently, research and discussions exploring the concept of mediumsized cities are very limited (SEASONS, 2003). While reviewing various urban-related publications from 2000 to 2019 on Google Scholar, Growe (2021) found that the keywords "global city", "world city", or "major city" yielded far greater search results than publications obtained with the keywords "small and medium-sized cities" or "small and medium-sized towns". It was also observed that the increase in research activities related to small and medium sized urban areas was not as dynamic (GROWE, 2021). Furthermore, gaps in research on the economic significance and development of medium-sized cities are also prevalent. For instance, current studies in economics are mainly focused on major cities and metropolitan areas, which are often regarded as the most important centers (or knowledge-bases) of economic activity (HANNEMANN, 2018). This neglects the fact that medium-sized cities can also contribute to the economic performance of a metropolitan area.

Hannemann (2018) also states that small and medium-sized cities tend to be overlooked in political and social perceptions. The advantages and disadvantages of medium-sized cities compared to large cities are still largely unexplored, and the impact and relevance of their regional policies are very unclear (Meil, 2019; Sassen, 2001). In 2016, it was reported that in the last few decades, medium-sized cities have experienced significant and unexpected changes (Flatt, 2017). However, changes that occur in lesser-known medium-sized cities around the world are still rarely discussed and were grossly neglected until recently (Taylor, 2007). Although medium-sized cities have gained more attention than in previous years, in general, research on large cities and metropolitan areas are still the focus of publication activities in the fields of urban geography, spatial planning, and urban systems research (as representative disciplines in the scientific context) (Growe, 2021).

Cities or urban agglomeration cores are still primarily defined by geographic and demographic criteria, such as mega, metropolitan, large, medium, and small, indicating their place in domestic and international urban networks (UCLG, 2016). The definition "intermediate" was first used in the scientific field in the mid-1980s to expand the meaning of the term "medium or medium-sized city", which previously only referred to a city's demographic size (Bolay & Rabinovich, 2004). Many more definitions and redefinitions are still on-going. The use of the term medium-sized city is useful to categorize a particular type of city. However, defining "city" itself is difficult, because it needs to be linked to local, regional, and international understandings of factors such as size and economy (Dijkstra, 2018). Medium-sized cities have very different characteristics from each other. Therefore, they are often interpreted very differently in individual case

studies. Since the definition of a medium-sized city varies widely, terms like "small" and "medium sized" generally refer to the population size of a city and can be influenced by the density of the population and its distribution to a country (GROWE, 2021, p. 106).

Many cities are considered medium sized, despite their population being quite large, because most inhabitants reside in suburbs or satellites of other much larger cities. The Rochester conversation (2002) began by assuming that any city with a population between a hundred thousand and three hundred thousand people and with a metropolitan statistical area containing at least 1 million people could be considered a medium-sized city. However, population size is not the only (or key) criteria associated with such places. The term "medium" has the potential to denote other indicators such as the role or function of a city and the degree of international recognition or scale of specialization in areas such as business, art, or education (BUDGE, 2009). Medium-sized cities are often expressed as "second-level", "secondary", or "intermediate", and these terms are often used interchangeably. Many choose to use the latter term because it is a word that describes urban scale without implying a place in an established urban hierarchy (FLATT, 2017). The term "intermediate city" is used to describe medium sized towns or secondary cities, without attempting to distinguish them from each other or define them in a functional typology (Bolay, 2020). There are many types of intermediate cities that meet a statistical definition, and these cities might not all share the same commonalities. Furthermore, the concept of 'intermediary' cities defines urban agglomerations based on their role to provide economic links between rural towns and metropolitan areas within national boundaries (Bolay & Rabinovich, 2004). Medium-sized cities face typical urban issues such as increased ethnic and economic diversity, job losses, decaying and inadequate public infrastructure, and land conversion. These are important and difficult issues (FULTON, 2002). Furthermore, demographic changes are also a concern for intermediate cities since they grow faster on average than large cities. Cities with a population size of less than half a million are precisely the cities that have the highest rate of population growth and there are many of them (BIRKMANN, 2016). They are typically more distinct in ethnic, religious, and class terms than the towns or villages from which new resident originate (PORTER, 2018) WHICH is precisely why these cities should not be overlooked (FULTON, 2002).

Prior research on medium-sized cities was concentrated primarily on size and function. Many interpretations of small and intermediate cities were associated with population size and a functional role in regional and national economic development from the 1980s to the early 2000s because population data is more readily available and easy to obtain than economic, land use, or labor data. Hence, population size is frequently used to define small and medium-sized cities (RONDINELLI, 1986). Although the population size approach is still an important criterion, the World Organization of United Cities and Local Governments (2016) recently argued that medium-sized cities are also defined by political and economic circumstances, with their pluralism being a direct response to the various outcomes of the urbanization process in each territorial context. The majority of studies on small and intermediate cities conducted in Europe, Australia, and America defined these cities based on the various ways in which the city sustained and competed in national and global networks, thereby demonstrating the importance of relational perspectives in research (JAYNE, 2010). Furthermore, according to Bellet et al. (2003), the term intermediary city refers to a relationship with a variety of hierarchies and urban networks, including land networks, rural spaces, and natural environmental systems that influence how such urban spaces function.

This study applies the concept of Bellet et al. (2003) to define intermediate cities from a relational perspective. Therefore, in this study, intermediate cities are not only defined by their specific demographic and size dimensions, but also by their roles, such as serving as intermediaries for the distribution of materials, information, technology, and administration between cities and suburbs. This can occur within their respective spheres of influence and with the centers of other urban areas which may be close or distant. Furthermore, population criteria are primarily used to assess the potential for rapid urbanization pressures in cities.

Urbanization has offered opportunities for economic development, well-being, and quality of life in urban and regional areas, as it serves as a transformative process that can deliver higher productivity to an area and strengthen the spatial structure of cities and regions both in internal and external contexts (WORLD BANK, 2006). Intermediate cities can make important contributions to their city-regions. Medium-sized cities with 100,000 to 500,000 inhabitants are oftentimes the pillars of polycentric urban areas. This has been observed in some small and medium-sized cities in Europe (ADAM, 2006). These cities do not appear as single types; unlike metropolitan cities or large cities, they usually do not offer the economic advantages of larger market sizes, labor markets, and knowledge exchanges throughout urban areas.

Intermediate cities tend to offer a more localized economy in the industries they specialize in. As a result, while major cities are more likely to develop sectoral strength in advanced producer services, intermediate cities tend to be more diverse in the composition of their specialized sectors (HILDRETH, 2007). One of the important reasons that medium-sized cities are increasingly mentioned is related to perceptions of their quality of life. Most intermediate cities offer relatively low housing prices compared to national averages, as well as better access to open country sides and national parks. Moreover, lower population density in these cities has led to reduced pressure on infrastructural needs, hence it can be said that they generally face fewer challenges in terms of affordability and availability of housing, traffic congestion, and other problems that often afflict large cities (CLIFTON, 2016). Furthermore, it has been suggested that smaller cities are more feasible because they have "smaller" environmental problems and fewer agglomeration diseconomies (CLIFTON, 2016).

Due to their size, intermediate cities should also have greater resilience to respond to environmental issues quickly and at an early stage (VÉRON, 2010). But the views mentioned above on intermediate cities are not the same as those expressed by Bolay (2020), who contends that, just because they are smaller in size, it does not mean that the problems faced by these intermediate cities are less serious and easier to solve. In

reality, these cities are rarely known outside provincial or national boundaries, thus they have difficulty in attracting interest and funding. Therefore, they must also manage their problems locally, without structured and consistent outside support or recognition for their efforts. Intermediate cities are commonly considered as places of economic growth and prosperity as well as containing marginalized areas and poverty (WORLD BANK, 2009). Most of the problems they face are the result of having limited data, resources, and political power (BIRKMANN, 2016). Moreover, they often have insufficient budgets to meet their needs, thus making them dependent on central governments and lenders. Small and intermediate cities are home to most of the world's vulnerable urban populations (WISNER, 2015) and they are often isolated and overshadowed by larger towns and cities (LONGLANDS, 2016). Concerning cities that are advanced in the fields of industry and technology, intermediary cities have long suffered from the superiority of major cities (BOLAY, 2020).

Urban areas are constantly being assimilated into the global economy and are benefiting from computer connectivity and new communication technologies. The economic and political integration of countries that two to three decades ago were marginalized offers new technological capacities to better manage cities and anticipate future changes (Bolay, 2020). Small and intermediate cities rarely have urban planning agencies. When they have them, the agencies are oftentimes not equipped with staff who are competent and trained in advanced mapping and GIS techniques, and they do not possess the latest generation of computer equipment or systems (Bolay, 2020). Urbanization is not limited to certain regions of the world. However, the rate of urbanization is seen to be fastest in the southern global cities of Asia (Onodugo, 2019). More current and more pertinent is the evidence that urbanization follows on the coattails of the globalization of economic exchanges and rural-urban demographic alterations (Marcuse, 2014). Theoretical arguments about "urban reality" are often dominated by urban cities in Europe and North America (Edensor, 2012). However, recent studies have also revealed that some cities in the Global South, such as Singapore, have

emerged as poster children for sustainable urban development (Shatkin, 2013). As such, some cities outside of Europe and North America have come to symbolize an efficient and growth-oriented urban development model (Shatkin, 2013).

Mistakes in urban planning will have major effects on small and medium-sized cities where there is a lack of human resources and finances to deal with important issues (Bolay, 2020). Not being aware or not carefully acknowledging the characteristics of intermediate cities would mean discounting their potential for growth and development (Bolay & Behrend, 2003). Looking at the potentials and problems of intermediate cities, it is important to be able to understand urban planning (Newman, 2011). Urban population growth is becoming an important phenomenon in many developing countries; hence it is critical to plan for sustainable cities (Jeduar, 2017) because they must face multiple challenges of rapid urbanization and weak governance capacity. Demographic and territorial growth in cities of the Global South inevitably result in concentrations of poverty, as well as social, economic, and spatial inequalities (Watson, 2009). As an urban population increases, land supply problems, congestion, ecosystem degradation and risk will arise (Brown, 2015). The rapid urban growth (such as widespread urbanization) constructs social, economic, ecological, and governmental conflicts due to disparities that become apparent between the core city and the expanded urban areas (Shatkin, 2019).

Peri-urban areas are generally the result of the expansion of urban activities beyond existing administrative boundaries of urban areas. Peri-urbanization is defined as a process by which rural areas on the outskirts of established cities become more urban in character, including in physical, economic, and social terms (Webster, 2002). The character shifts from agriculture to manufacturing as a result of rapid population growth and migration, rising land values, and mixed land use. At first glance, peri-urbanization processes in the world appear to be highly diversified (e.g. in developed and developing countries). Topics such as global economic competition, urban welfare, regionalization, and growing city populations combined with a rural decrease have been linked to urbanization in developed countries (OECD/European Commission, 2020). In developing

countries, urbanization has shown attributes such as rural urban migration, an increasing natural population and rural urbanization.

In order to characterize and clearly describe peri-urban space, some key points are emphasized. First, the dominant focus is on the urban and rural interplay of peri-urban areas and their development. Peri-urban zones can then be defined as a transition zone between city and mainly agricultural urban land (RAKODI, 2002). In the Global South, some areas that are now known and referred to as cities largely originated as rural areas and had some form of informal planning (ONODUGO, 2019). Peri-urbanization can be interpreted as a process of transformation that is experienced by rural areas located near established cities. This transformation process usually occurs within a diameter of 30-50 km around large cities, though it could be wider in metropolitan areas. The changes related to rural areas gaining a more urban character, both in physical, economic, and social terms, often occur gradually (DAVID, 2008). The peri-urban area can also be interpreted as a transitional area between urban land in the city and agriculturally dominated areas (RAKODI, 2002). Effective planning of expanded geographic areas requires an adequate level of local authority and the availability of metropolitan resources. In many poor countries, however, governance capacity is completely inadequate (DAVID, 2008). Therefore, peri-urbanization is very strong in urban regions of the Global South.

One of the central aspects is the decline in population growth in the center followed by the spread of urban populations to the peripheral areas, including new cities (FIRMAN, 2004). Urbanization of these peripheries does not involve spaces that have been prepared to be ready for consumption or habitation. Rather, it involves a space that is never completed and is always altered, expanded, and elaborated (CALDEIRA, 2017). During peri-urbanization, it is important to create a sustainable policy strategy to address frequent conflicts due to shared resources and demand for services between the rich and the poor, which are generally concentrated in separate and highly segregated environments (DAVID, 2008).

Peripheral urbanization is an ever-moving process, reproduced in places where land prices are cheaper because the land is more precarious or difficult to access (CALDEIRA, 2017). Historically, most residents in periphery areas were poor, however, the migration of rich people who built large houses on cheaper land in the peri-urban areas often changed the socioeconomic profile of the residents (DAVID, 2008). Peripheral urbanization is not always without planning or without the absence of government presence. Rather, it is a process that entangles citizens and government in the production of cities of great heterogeneity and dynamism where residents take a role in producing space, while the government is present to organize, ratify, make plans, provide infrastructure, security, and increase space. Oftentimes the government acts to modify the periphery area after the spaces are already built and inhabited (CALDEIRA, 2017).

2.2 The Concept of Vulnerability and Resilience

In recent years, researchers from a broad range of scientific disciplines, particularly those concerned with spatial research, have come to address issues of vulnerability and resilience. Natural disasters and the related concepts of vulnerability and resilience have piqued the interest of geographers, planners, and regional development researchers (BIRKMANN & GREIVING, 2008).

2.2.1 The Concept of Vulnerability

The term vulnerability was first used to understand the interface between social and environmental systems in the context of disasters (KATES & WHITE 1993). This concept also connected disasters and development, as disaster impacts were seen as a result of social concerns and pressures that needed to be addressed as part of day-to-day planning (LEWIS, 1999). According to De Sherbinin (2007), vulnerability has three important components: the lack of protection during a crisis, pressures that can disrupt the sustainability of community life, community capacity to deal with disasters, and delays in handling when a disaster occurs. Causes of a natural disaster and an increased risk of disasters are associated with an increase in the population. People are easily becoming more vulnerable as the population increases. Moreover, they often live in hazardous

areas. There are also recurring topics such as poverty in the countryside that characterize how development forms risk worldwide (Benson, 2004). Cities with fewer than 500,000 inhabitants are the type of urban settlements with the largest proportion of the world's urban population; hence, the population of these environmental risk areas is likely to exceed the total number of people at risk in metropolitan areas (Pelling, 2012).

Urban areas consist of physical and spatial aspects that can be classified into key functional areas: settlement, work and shopping, general use, open space, transportation, and supply (ALBERS, 2011). Urban areas were identified as being particularly vulnerable to climate change and coastal hazards. Residential management and infrastructure development are regarded as challenges in developing and emerging economies (SATTERTHWAITE, 2007). Spatial use and functions in urban areas affect urban growth and the social setting of urban areas, leading in the population's exposure and vulnerability to natural hazards. The spatial-temporal variation of populations is an important component of vulnerability due to the dynamics of the urban mobility pattern. A large number of a city's residents will frequently congregate in areas with much more services and equipment. Exposure rises in proportion to the density of a community in hazardous areas. This intensity can manifest itself in the pace of urbanization mobility activities such as migration to and from hinterland areas to urban areas, which range from long and medium-term planning periods (SETIADI, 2014).

Vulnerability is a broad concept that can be interpreted in a variety of ways (DENIS, 2010). The concept of vulnerability arose in response to the paradigm that disasters are natural and that disaster risk is solely determined by the natural characteristics of the hazards (Setiadi, 2014). Field (2012) defines vulnerability as a social construction of disaster risk by transforming physical events into hazards of varying intensities or magnitudes through social processes that increase the exposure and vulnerability of population groups, their livelihoods, production, support infrastructure, and services. Vulnerability information is especially important for determining and prioritizing areas where development is restricted or land use allocations are improved. In this area, people

are less capable and current facilities can increase the potential impact of already "low" or "moderate" hazard events (DENIS, 2010).

Structure of vulnerability as an analytical framework considers the external and internal aspects of vulnerability. The external side deals with vulnerability and exposure to risk, as well as structural aspects that can be explained in terms of human ecology, legal theory, and political-economic approaches (WATTS, 1993). The internal side, on the other hand, focuses on coping and action to overcome or mitigate the negative effects of economic and ecological change, and the ability to withstand and recover from the impact of a hazard (SETIADI, 2014).

Another well-known vulnerability concept is the concept put forward by Wisner et al. (2004), who see vulnerability as the intersection of two major forces: those processes that generate vulnerability and, on the other hand, the natural hazard event. It is concerned with the underlying causes and dynamic pressures that determine vulnerability and unsafe conditions. Buckle (1998) argued that vulnerability within the context of emergency management should be overcome with the goal of effective delivery of services to the foremost applicable target cluster and meeting needs. With a growing focus on cities and disasters, it is important to consider the fundamentals for understanding urban risk. An impenetrable view of the urban disaster literature also shows that what we know comes from the experiences of most major cities, national and regional capitals, urban mega-regions, and other centers of power and influence. Smaller urban centers, those "clearly visible" cities that will be responsible for most of Asia's urban development in the coming decades, are largely absent (DAVIS, 2004).

Unlike large cities, where environmental knowledge is gained from previous experiences with hazards and disasters that lead to good disaster risk management, young and rapidly growing cities frequently do not adjust to risk because they have not experienced the trauma of disaster in their short lives (RUMBACH, 2016). Mark Peeling (2012) argues that disaster researchers and policy makers have relatively little knowledge of small cities, and that projecting the knowledge gained from large cities is flawed. In the

context of disasters and disaster risk management, Rumbach (2016) describes four characteristics of small cities that set them apart from larger urban areas. First, small cities suffer from distance tyranny; their physical, cultural, and political isolation from centers of power and influence renders disaster risk management policy, resources, and research less reflective of their needs and priorities. Second, there is a misalignment of risk and capacity. Many of the risks associated with urbanization are experienced by small cities, which lack the capacity for even basic planning or urban management. Third, the rate of urbanization in small cities frequently outpaces the rate of environmental learning. Fourth, small cities lack redundancy in critical areas for disaster risk reduction, particularly in infrastructure and civil society.

There is a fundamental understanding that a disaster risk is made up of the hazards and vulnerabilities of the exposed elements. The risk or potential impact of a disaster event is determined not only by the characteristics of the hazard itself, but also by its interaction with vulnerable exposed elements (Setiadi, 2014). The disaster risk comprises different types of potential losses such as death, injury, disease, and other negative effects on human physical, psychological, and social conditions, along with loss of assets and services. With the knowledge of existing hazards, population patterns and socio-economic development, the risk of disaster can be measured and mapped (ISDR, 2009).

2.2.2 The Concept of Resilience

The increasing complexity and rapid changes around the globe have led to a worldwide interest in resilience as a concept for better understanding, handling, and regulating challenging socio-ecological systems, as well as applying capacities to deal with (and adapt to) structural changes (Burton, 2012). Resilience is derived from the Latin word *resilio*, which means "to return" (Klein et al., 2003). Holling (1973) is considered as one of the first to define and use the term "resilience" in ecology. He identified resilience as a measure of a system's ability to absorb change and disturbance while preserving the same relationships between populations or state variables that govern its performance.

The study of resilience emerged from psychology and psychiatry in the 1940s, nonetheless, after more than four decades of valuable scientific work on the topic of resilience, it is used in many fields of study including hazards (Bruneu, 2003; Mayunga, 2009; Renschler, 2010) and geography (Burton, 2012; Cutter, 2008). Despite the fact that there are numerous definitions of resilience, in the context of disaster management, the majority of them define it as a community's ability to withstand difficulties in order to avoid changes or to endure a shock without collapsing when confronted with a dramatic change (Alliance, 2007; Anderies, 2004). Since the purpose of this study is to comprehend the meaning and criteria of resilience in the context of natural hazards or disasters, we will concentrate on disaster resilience, as well as its notions and parameters for the remainder of this chapter.

The inclusion of the resilience construct in disaster and development discourse is relatively new. It first appeared in disaster and development publications during the 1990s (GAILLARD, 2007). The term disaster resilience has received widespread support from a wide range of disciplines, institutes, and risk experts; however, there is no agreement on its definition in the literature. The term "resilience" used in this study refers to concepts that focus on human communities and system ability. Some of the concepts are proposed by Mileti (1999), Paton (2001), and Klein (2003), who defined resilience as the ability to survive an extreme event without suffering significant losses, damage, disrupted productivity, or quality of life without requiring a large amount of assistance from outside the society, as well as the ability to use physical and socio-economic money efficiently to aid recovery after the exposure to hazards. The government of Indonesia defines resilience as the ability to survive, absorb, adapt, and recover from disasters and climate change in a timely, effective, and efficient manner (BNPB, 2020). Another idea comes from Mayunga (2007) who defines disaster resiliency as "a community's ability to anticipate, prepare for, respond to, and recover quickly from disaster impacts" (p. 4).

The majority of the resilience definitions stated by scholars are concerned with human populations and capabilities systems. This demonstrates that many researchers

agree that disaster resilience is defined as a system's, community's, society's, or people's ability to resist, mitigate, respond to, and recover from the effects of a disaster (MANYENA, 2009). According to the definitions given above, resilience in this thesis is viewed as a community's ability to absorb stress or destructive forces through resistance or adaptation and the ability to secure primary functions and structures before a disaster, during disasters, and the ability to recover after a disaster. Therefore, a focus on resilience means a greater attention on what citizens can do for themselves and how to maximize their capacities, rather than their vulnerability to disaster, environmental shocks and pressure, or their needs in an emergency.

2.2.3 The Relationship between Resilience, Sustainability, and Vulnerability

There are some definitions of vulnerability that have addressed the relationship between resilience and vulnerability. For instance, Timmermann (1981) declared that the degree to which a system reacts negatively to the occurrence of a hazardous event is referred to as vulnerability and that the level and quality of the unfavorable response are influenced by a system's resilience. In hazard fields, resilience is interlinked with vulnerability and resilience is viewed as a subcategory of vulnerability (Turner, 2003).

Researchers also contend that the term resilience is related to the concept of sustainability and that resilience represents a new paradigm about sustainability (BURTON, 2012). Resilience and vulnerability are also thought to be distinct concepts (CUTTER, 2008; MAYUNGA, 2007). This means that resilient communities exhibit less vulnerability, and vulnerable communities do not exhibit resilience aspects. According to several studies, there is a significant correlation between the concepts of sustainability, vulnerability, and disaster resilience (Meilenium Ecosystem Assesment, 2003; Paton, 2001; Pickett, 2004).

Although there is a strong correlation between each of the three concepts, the complexity of these relationships is highlighted, particularly for vulnerability and resilience. There are significant connections between vulnerability, resilience, and sustainability; it is important to incorporate all three aspects in order to achieve successful disaster recovery and the goal of rebuilding disaster victims' lives to be better

than they were before the disaster occurred (bounce ahead) (JOAKIM, 2012). Thus, the following section examines the connection between sustainability and vulnerability as well as community disaster resilience.

Resilience and sustainability are commonly noted as the guiding principles for an effective risk management strategy (MILETI, 1999; TOBIN, 1999). Resilience is viewed as a fundamental requirement for long-term viability in some contributions. According to Levin et al. (1998), resilience is an adequate strategy for dealing with sustainability in both social sciences and natural systems. Therefore, it implies a parallel for resilience and sustainability. Being resilient over long periods of time is unavoidable in order to be a sustainable community or society because it will be influenced by unpredictable impacts and disturbances. As mentioned by Folke (2003), Klein (2003), and Walker (2004), the concept of community disaster resilience is seen as a desirable aspect of both social and physical systems when confronting natural disasters because it contributes to community sustainability. Thus, resilience is the key to sustainability.

Carpenter (2001) contends that resilience is frequently used to explain the specific characteristics of a community that are linked to sustainability. According to Cutter (2008), the concept of sustainability is the core principle of resilience studies, and resilient society is associated with the functional performance of ecosystems. The resilience approach is not only a strategy for hazard and disaster management, but it also influences the path to sustainability. In this regard, the urban disaster-resilient approach should be adopted as a more comprehensive plan for urban sustainability aimed at exhibiting low risk, low vulnerability, and an appropriate planning scale (TOBIN, 1999). Therefore, the concept of resilience helps us gain a better and more comprehensive understanding of risk and vulnerability (BERKES,2007). In an early study on vulnerability, O'Keefe et al. (1976) found that socioeconomic vulnerabilities are more influential than natural aspects in causing disasters. This means that, instead of viewing natural hazards and disasters as solely physical events, mindsets should concentrate on increasing the knowledge of such incidences in terms of human behavior (MAYUNGA, 2009). This perspective alteration has

influenced people to see resilience and vulnerability as consecutive concepts, as well as natural hazards as the result of interactions between the physical environment, socio-cultural aspects, and built environment systems (Mayunga, 2009). As a result, efforts to reduce the adverse effects of natural hazards that have a great capacity for disturbance and damage have been replaced by a focus on preparedness actions and engaging with unexpected disasters that challenge population adaptability and the level of capacity to survive after the disaster (Burton, 2012).

2.2.4 Community Resilience

Community disaster resilience is a diverse concept that encompasses multiple aspects of a society that are frequently overlooked in vulnerability assessments (Burton, 2012). Even though disaster resilience can debatably take many forms across many disciplines, as a concept, it is growing and appears to be more attractive to hazard scholars than vulnerability (MAYUNGA, 2009). As a result, the disaster resilient community represents enthusiasm to improve the potential of both social and physical systems to cope and recover from disasters (BRUNEAU, 2007). The importance of assessing the involved factors in resilience, both before and after a disaster, has been emphasized as a first step toward reducing losses from a hazardous event (MAGUIRE, 2008). Community disaster resilience is a broader concept that consists of defining various risks (TWIGG, 2007). It focuses on the community's strengths and how to improve them while minimizing the factors that make the community vulnerable (MANYENA, 2009). Thus, community's resilience is the ability to absorb stress or destructive forces through resistance or adaptation and the ability to secure primary functions and structures before disaster, during disasters, and the ability to recover after a disaster. Therefore, a focus on resilience means greater attention is put toward improving what citizens can do for themselves and maximizing their capacities, rather than focusing on their vulnerability to disasters, environmental shocks and pressures, or their needs in an emergency.

2.2.5 Components of Community Resilience

In his research, Asadzadeh (2016) identified eight main components as important aspects of the concept of community resilience: (1) community knowledge, (2) relationships and community networks, (3) communication, (4) health, (5) governance, (6) resources, (7) economic investment, and (8) preparedness. These aspects, which will be briefly introduced here, have been used in this study to assess community resilience in the study area.

1. Community Knowledge

If a community understands its potential vulnerabilities, the impacts of a disaster, whether short-term or long-term, can be mitigated. These vulnerabilities, if addressed prior to a disaster, are assumed to construct community resilience (KENNEDY, 2013). There are three sub-elements concerning community knowledge. First is a community's accurate knowledge base. Accurate knowledge is defined as the information, education, and experience gained concerning a disaster, including specific learned information related to a disaster or disaster preparedness, such as knowledge about first aid (CASTLEDEN, 2011) and other issues related to disaster preparedness, mitigation, response, and recovery (Cox, 2015). The second sub-element is training and education, which is an essential component of community resilience. This includes community disaster education as part of the regular curriculum, a warning system, collaboration with the media for education, and communicating with vulnerable communities via newsletters, as well as training (MOORE, 2012). The third sub-element is identified as a society's knowledge and common understanding of its capacity to withstand potential disaster-related difficulties through self-sufficiency. This can be critical in relief efforts, especially if the people rely on their revenue (Chandra, 2011).

2. Relationships and Community Networks

During a disaster, positive effects on the community and its members can occur when they are well connected and form solidarity. Community connectivity

defines a community as a "social network", which connects community members through social relationships (Cox, 2015; PFEFFERBAUM, 2015) or between communities (Bahadur, 2010). A community's solidarity is commonly described by the strength or weakness of its ties (Aldrich, 2015; Dawes, 2004; Paton, 2001). Several factors that influence bond strength, such as trust and shared values, might be related to optimized community resilience (Cutter, 2008). Togetherness is also mentioned as an important component of social capital, which theoretically emphasizes cohesion, bonding, and linking (Aldrich, 2015).

3. Communication

Norris (2008) describes communication as "the creation of common meanings and understandings and the provision of opportunities for members to articulate needs, views, and attitudes" (p. 140). Chandra (2011) states that "strong communication networks are critical for resilience" (p. 20) and that networks have "diversity of mode and content" (p. 20), such as using social media to encourage and promote emergency messages, preferably via a reputable and established source of information. During a disaster, the transfer of information in real-time is crucial. Communication should provide community members with up-to-date information about the ongoing effects of relief efforts (GANOR, 2003). Furthermore, Cox and Hamlen (2015) underline the importance of communications during an emergency, particularly through infrastructure and technology.

4. Health

Identifying potential health vulnerabilities can build resilience before a disaster and minimize long-term issues after a disaster. A community's pre-existing health and the availability of health services after a disaster are important for community resilience (Rego, 2005). Chandra (2011) proposes a care services facility for post-health-disaster shelters, particularly for low-income people, to aid in the recovery of physical health and livelihoods. With post-disaster health facilities, victims

receive ongoing treatment and services for health problems, both physically and mentally, such as providing trauma relief for disaster victims. Having such a capacity would establish a high level of quality and care service in the aftermath of a disaster.

5. Governance

Communities' responses to disasters are shaped by governance and leadership (Coles, 2004). In governance, there are two sub-elements: (1) infrastructure and services, and (2) community participation (AHMED, 2004). For a community's infrastructure and services, suitability, efficiency (RENSCHLER ET AL., 2010) and the ability to respond quickly are crucial (Carlson, 2012). The government must have good infrastructure plans in place to manage disaster information, forward instructions, and respond during and after the disaster (PFEFFERBAUM, 2013). Various studies have stated that having public participation and delegation in planning, response, and recovery is important in terms of community involvement and support (Chandra, 2011; Dawes, 2004; Turnbull, 2013; Zakour, 2013). Community participation may relate to local leaders who comprehend and represent the people's diversity and aspirations, which can strengthen trust in risk and crisis communications (Moore, 2012).

6. Resources

Several publications have defined 'resources' as intangible elements such as "natural, physical, human, financial, and social resources" (COHEN, 2013, p. 2) and many more mentioned the importance of providing these resources so that they are widely accessible and shared with the community (CARLSON, 2012; ZAKOUR, 2013). Furthermore, it has been recommended that simply possessing physical resources such as food or water is insufficient; a resilient community should be able to utilize these resources (WHITE, 2015) and manage them properly within the community (COLES, 2004).

7. Economic Investment

The impact of disasters on the economy (both direct and indirect) can disrupt the disaster-affected community in the long term after a disaster occurs (ZAKOUR, 2013). Managing the post-disaster economic situation entails distributing financial resources, economic development of post-disaster infrastructure, and diversifying economic resources (Coles, 2004). This can be accomplished through proactive investment in the economy's reconstruction (NATIONAL RESEARCH COUNCIL, 2012). Following a disaster, it is also important to assess a community's current economy and develop its ability to sustain economic growth (RENSCHLER ET AL., 2010). A community's economic strength after a disaster may be crucial not only for recovery but also for reducing future disaster risks (SMITH, 2012).

8. Preparedness

Before a disaster, emergency management systems should create strategies for how the disaster-response systems will operate (TIERNEY & BRUNEAU, 2007). Correspondingly, Cox (2015) believes that risk assessment would support preparedness. Before a disaster, Carlson (2012) recommends taking precautions such as relocating buildings and infrastructure from disaster-prone areas to safer ones. Furthermore, planning, mitigation strategies, and overall preparedness are all aimed at ensuring a long-term response and recovery for communities, as well as reducing the risk of danger to people (Moore, 2012). Uncertainty is a common feeling among disaster survivors (Ganor, 2003). Uncertainty manifests itself in various ways, ranging from distress on what the future will bring to fears about the long-term adverse effects on the community (KIRMAYER, 2009). People can cope with uncertainty by expecting things to improve and accepting that things will be different after a disaster (Ganor, 2003). According to Bahadur (2010) one of the ten main characteristics of a resilient system is "acceptance of uncertainty and change" (p. 15).

3. Research Method: Qualitative Case Study

This chapter discusses and provides a detailed account of the research country and area's selection procedures and describes the methodological steps used for data collection. It also includes the process of deciding on the empirical methods and tools that were used during the various stages of the research study. The difficulties and challenges encountered while conducting field research are also discussed.

The goal of this exploratory study is to determine Palu's development process and how it has been influenced by shifts in the political system from centralization to decentralization, as well as how the natural disaster affected Palu's urban development and people's lives, thereby shedding light on the urban transformation process of a medium-sized city in a developing country. This study employs qualitative research by utilizing a case study that allows for analytical replications or generalizations within a theoretical framework. Because the previously mentioned phenomena can be observed in Palu, a case study approach is an appropriate research method for this study (YIN 2002, p. 13).

3.1 Selected Case Study: Preliminary Criteria

In case study research, the selection of a case is fundamentally important. The choice of a case for study carries implications for several preliminary criteria of small cities that may be investigated later in the research. Yin (2002, p. 22) has discussed the criteria which are important in selecting an exploratory case study.

The case selection criteria for this study included selecting a case that would reveal the unique potential, problems, and capacity of medium-sized cities beyond generalized measurement or deterministic characteristics (Bell & Jayne, 2009). The preliminary criteria for selecting a case study include the potential pressure exerted by and the presence of strong interrelationships of urban growth between medium-sized cities and their surrounding regions, as indicated by urban population growth. This includes not only the city's urban population growth, but also the growth of the surrounding regions, criteria that support this study's perspective on medium-sized cities as sites of dynamic flows of

power, interests, and activities between the city and the surrounding regions. In addition to general considerations for the study of medium-sized cities, these criteria are also relevant to the specific phenomenon of urbanization in the eastern part of Indonesia. This region has exhibited an increasing urban population growth in small- and medium sized municipal cities during the decentralization era, a process that has resulted in urban development activities and population concentrations that are not only concentrated in municipal cities (the core regions), but also in adjacent regencies (the peripheral regions). Palu was chosen as a case study, because the city and its surroundings are representative of medium-sized cities and the issues they face in developing countries, especially concerning the rapid urbanization issues that occurred during the era of decentralization.

3.2 Research Sites

3.2.1. Topographical and Climate of Palu

Palu is the provincial capital of Sulawesi Tengah, which can be divided into four regencies and 43 villages. Palu has an area of 356 km² and is densely populated with more than 373,857 people (KEMENDAGRI, 2021). Palu has distinct physical characteristics, such as mountains within the landscape and the bay around the city of Palu as the coastline (AMAR, 2012). According to Surono (2003), the morphology of Palu, which is located in Palu Bay, is characterized by hilly morphology toward the steep mountainsides in the West and East (see fig. 1). This city encompasses some of the Palu bay areas and the majority of the Palu watershed area is covered by primary forests, the density of which has decreased due to climate change (Tunas, 2019). Palu Bay has a coastline with a total area of aprox. 101 km² and a length of 77.1 km. Palu Bay can be found between 00°38'14.1"- 00°54'5.5" South Latitude and 119°44'21.6"- 119°51'51.0" East Longitude. The majority of the city's development takes place along the Palu River (ASIAN DEVELOPMENT BANK, 2019). The flow of this river divides the city into two major sections, the western region and the eastern region. These physical conditions played a role in the formation of Palu as a bay city, which is distinguished by the main form of the valley, with the city center located in the valley's center (AMAR, 2012).

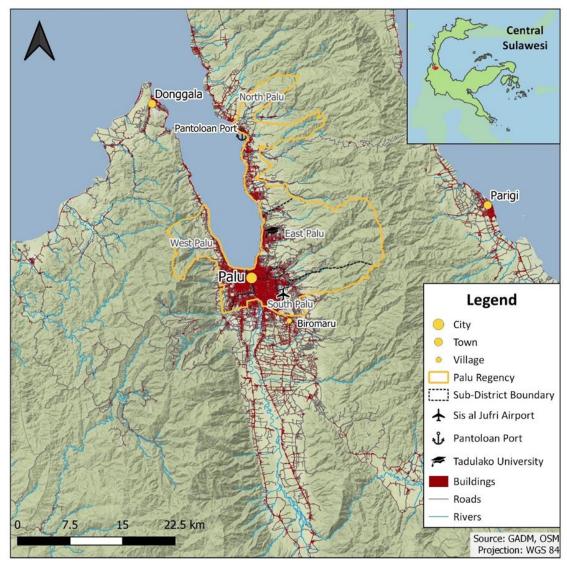


Figure 1: Study Area

Note: Map depicts the district boundaries as well as the distribution of Palu's buildings and significant infrastructure locations. Own elaboration with data from Global Administrative Areas (2018) and OpenStreetMap contributors (2015).

The Palu landscape stretches from East to West with an area of 395.06 km² (PARURA, 2020). The northern part of Palu faces the bay and the mountains, including Mount Torompupu and others that surround the city from the West, East, and South. Because of its mountainous surroundings (see fig. 2), the rainfall amount in the river's downstream area is relatively low, ranging from 60 to 100 mm per month, and the

average annual rainfall amount at Parome Station is around 1,000 mm (2003-2017) (BALAI WILAYAH SUNGAI KOTA PALU, 2018).

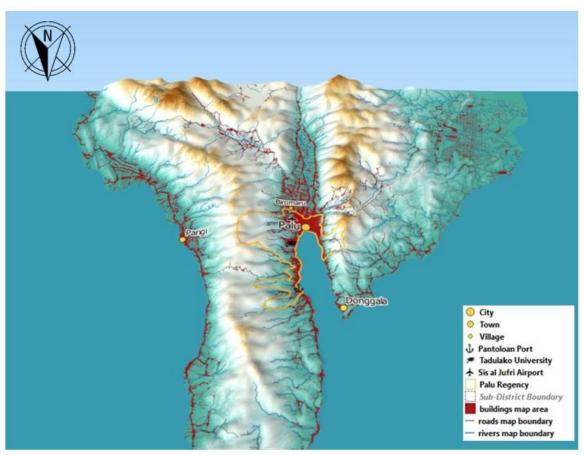


Figure 2: 3D Map of Palu showing the topography of the surrounding area

Note: Map orientation is inverted to better view Palu Bay and its surrounding Topography. The 3D map depicts the land's elevation to provide an overview of the location of buildings that are generally found within Palu valley. Own elaboration with data from Global Administrative Areas (2018) and OpenStreetMap contributors (2015).

Palu's landscape can be divided into two geological units, namely plain morphology and hill morphology. The plains have irregular topography and have seasonal flooding. Riverbeds generally rise due to fluvial sedimentation. The main material in this morphology is in the form of alluvial rivers and beaches with morphological formations in the form of plains and slopes of 0-5 %. This geomorphological unit dominates Palu's central region. Due to the location of the city in relation to the equator, temperatures in the lowlands range from 21°C to 35°C, while temperatures in the highlands range from

15°C to 30°C. The average annual temperature in the lowlands is around 27°C (INDONESIA NATIONAL DEVELOPMENT PLANNING AGENCY, 2019).

3.2.2 Regional Geological Conditions and Tectonic Setting

Palu is situated in the collision zone of three active tectonic plates. As a result of frequent collisions, this city and its surroundings are frequently struck by destructive earthquakes (such as those in 1938, 1968, 1985, 2006, 2012, and 2018). The earthquake of 2018 occurred along the Palu-Koro Fault, which is active and influenced by the complex tectonic interaction of major subducting plates (Katsuichiro, 2019). Several deadly earthquake disasters have occurred in the past due to the Palu-Koro Fault zone (CIPTA ET AL., 2016; Pelinovsky, 1997; Thein, 2014).

The Palu-Koro Fault runs underneath Palu. It is Central Sulawesi's main active fault, with left-lateral movement and an NNW-SSE trend (Bellier, 2001; Daryono, 2016; Hamilton, 1979; Katili, 1970; Watkinson and Hall, 2017). The Palu-Koro Fault runs more than 300 kilometers from Palu Bay to the city and is linked to the North Sulawesi trench subduction zone. The active Palu-Koro fault is part of a system that includes a North Sulawesi subduction lane to the North and the Matano fault to the South. It is considered a ground fault located far from the subduction zone that exhibits a strike-slip pattern and sinistral movement (Hall, 2000) which caused a devastating effect when the earth quake erupted on September 28th, 2018 (Bao, 2019), and is spatially close to major fault lines which have historically had a high epicenter density (Dharmawan, 2017). This can be observed in figure 3.

Palu's geology is dominated by Cretaceous and Paleogene sediments and volcanic deposits. Palu is made up of five formations: the alluvium and coastal deposits formation, the celebes molasse formation, granite, metamorphic complex, and the tinombo formation. In the 1970s, the Indonesian Geological Survey investigated the formations (Sukamto, 1973). The urban area of Palu is a quarter sedimentary expanse. At lower elevations near the valley's center, silty clay, silt, and alluvial sand, as well as old river channel deposits were discovered along the Palu river. Surficial sediments in the low

relief hills on the valley's west and east sides are young and old alluvium fan deposits. Colluvium debris from gravel sand deposits are frequently found at higher elevations (Thein, 2014).

The Sulawesi Suture was formed by a plate collision between the Eurasian and Australian continents that began in the early Miocene. Early Miocene rocks and younger ages were mostly recorded as magmatism and volcanoes, which then became an area of land and offshore sedimentation (HAMILTON, 1979). Central Sulawesi is mostly composed of early Cretaceous metamorphic rocks. The underlying bases in this region are made up of several are overlapped by volcanic

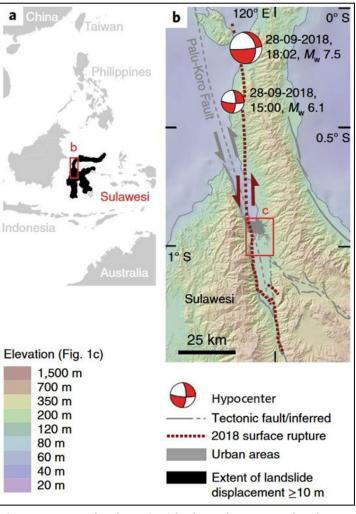


Figure 3: Central Sulawesi with the Palu-Koro Fault. The two largest earthquakes on September 28th, 2018 and the 7.5-Mw surface rupture.

Note. Map a. depicts location of Sulawesi. b. depicts the Palu-Koro Cretaceous metamorphic rocks.

The underlying bases in this region are made up of several metamorphic complexes that are overlapped by volcanic Note. Map a. depicts location of Sulawesi. b. depicts the Palu-Koro Fault and Palu. Palu Basin morpho-structural elements are depicted on a DEM map. Red & white balls represent the 2018 earthquake's hypocenter with magnitudes greater than 7.5 and depths less than 30 km. The Mw 7.5 earthquake's moment tensor and hypocenters are from the USGS Earthquake Catalog. Adapted from Watkinson, I.M., Hall, R. Impact of communal irrigation on the 2018 Palu earthquake-triggered landslides. Nat. Geosci. 12, 940–945 (2019). https://doi.org/10.1038/s41561-019-0448-x.

sediment deposits and magmatic intrusions ranging in composition from gabbro and diorite to granodiorite and granite (HAMILTON, 1979). As mentioned before Palu is located at the meeting point of three major plates, with each plate's boundary being a relatively

narrow deformation zone. Palu and its surroundings are an alluvial plain that runs relatively north-south and is bound by slopes and ridges on both sides of the valley through which the Palu River flows. This plain is dominated by Holocene aged alluvium lithology units of mud, clay, sand, gravel, and Kerakal (HASAN, 1994).

Palu is a complex area, also known as a suture, because the meeting point of the three plates is influenced by many other small plates (HALL, 2000). A Geomorphological Map (MURTOLO & HASAN, 1994) identified the presence of alluvial fans on the right and left sides of the Palu valley where the flow pattern occurs. The Palu Valley is reached via this alluvial fan. According to this condition, the sedimentation process is very strong towards the Palu Valley, with possible soil movement in areas of high topographic contrast and non-compact rock. Because of the aforementioned tectonic and geological conditions, Palu and its surroundings are relatively vulnerable to geological disasters (see fig. 4).

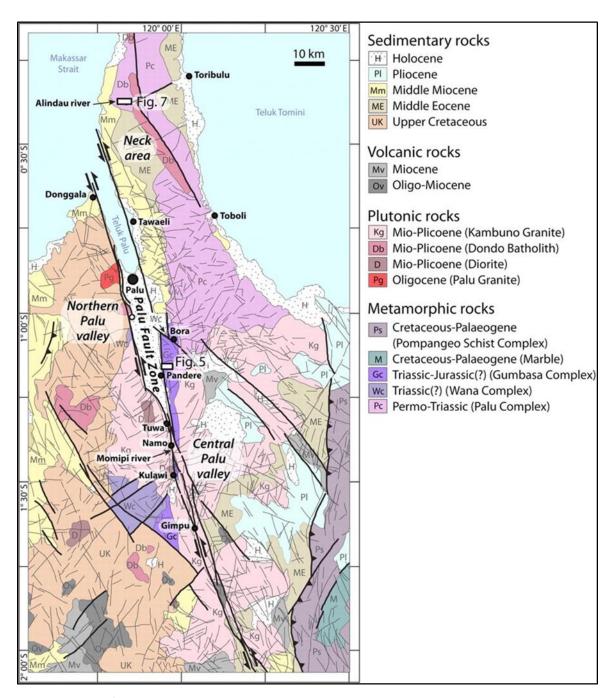


Figure 4: Ductile flow in Central Sulawesi metamorphic rocks

Note. Figure shows previously mapped strands, coseismal surface ruptures, and field investigation sites on the Palu-Koro fault. From Watkinson, 2011 in Hall, R., Cottam, M.A., and Wilson, M.E.J., eds., The SE Asian Gateway: History and Tectonics of the Australia-Asian Collision: Geological Society [London] Special Publication 355, pp. 157–176, https://doi.org/10.1144/SP3 55.8.

3.3 Case Study Design

The main purpose of this research is to understand the types, processes, and stages of urban development in medium-sized cities of developing countries. This research uses a case study approach to address both the research purpose and questions by focusing on Palu, a medium-sized city in Central Sulawesi Province, Indonesia. As generally recognized, a case study approach provides, amongst other advantages, insights into 'successful' cases so as to add more knowledge to a less known topic (FLYVBJERG, 2006).

3.3.1 Field-Research Methods

Research starting in 2017 aimed to find out how Palu's city development process had grown rapidly in the last 20 years (1999-2019). Empirical data was gathered during three stages of field work. In 2017, the first stage of data collection took place in Palu for a total of six weeks. The first mission's main goal was to start the process of forming the actor network to be interviewed. Second, in-depth interviews with actors from local governments, regional institutions, and communities were conducted in Palu in 2018 to identify supporting factors that played an important role in the city's development. To identify the changes, some analysis was required, including an examination of regional development over a 20-year period (which was revealed by an overview of land use change). Afterward, research questions were re-examined and adjusted based on the findings of the first collection of data in the field. It became necessary to reduce the number of interview questions, since interviewees reported that the interviews were very long, sometimes exceeding three hours. The second stage of data collection was short. This began in early September of 2018, and the second trip was brief because a natural disaster occurred during research and data collection, thus it had to be temporarily suspended until the situation at the study location was conducive. Because research was still in progress and had not reached its conclusion, the research objective was expanded in order to include how the condition of Palu was after the disaster, how the rebuilding process took place, and how the condition of Palu's communities was post-disaster. As a

result, researchers conducted the third stage of data collection in 2019. The research was carried out through field research, which yielded both primary and secondary data. The last field visit was the most difficult because conditions in Palu were less than ideal following the earthquake-tsunami, especially since there were many damaged buildings and inadequate infrastructure throughout the city.

During this time, visits were paid to disaster and evacuation sites on the ground and multiple interviews were conducted. During fieldwork, 70 people participated in indepth interviews. These were mostly mid-level local government representatives, academics, and community representatives (the types of respondents and reasons for their selection will be discussed in the subsection "sampling methods"). The interviews revealed respondents' perspectives on urban growth and development, as well as how they dealt with challenges related to system change, daily life, and hazards. The questions were framed in the context of the situation prior to and following decentralization. Following this, snowball sampling was used to select additional respondents. This was done so that key players' perspectives could be obtained. Key players are those who were previously involved in managing the city's and surrounding region's urban growth and development process. To strengthen its conclusions, rigorous qualitative research necessitates the use of multiple data sources (YIN, 2011). The triangulation of data collection aids in the conduct of thorough research (BAXTER & EYLES, 1997). According to Yin (2003, p. 15), case study research in particular can be based on a combination of quantitative and qualitative evidence.

3.3.2 Data Collection and Sampling

The interview questions were designed with open-ended unstructured questions such as What, When, How, Why, Who, and so on. Furthermore, for some questions, a scale was provided to rank the priority of the issues that should be addressed. The questions were then peer reviewed for feedback and comments on the overall presentation and clarity of the questions. Interviews were conducted in 2018 and 2019 in order to obtain data and information directly. In-depth interviews with local government

actors and academics as well as interviews with representatives of non-governmental organizations (NGOs) and community members provided primary data. The interview data was used to examine how urbanization and decentralization evolved in this context and to what extent they posed challenges for Palu's various capacities as a medium-sized city. These interviews were especially useful in understanding the urban development process.

Secondary data are sources that include government regulations, national and local newspapers, and previous research that relates to medium-sized city topics. This study employs a variety of statistical data sources to describe the process of demographic, infrastructural, and economic development of Palu. Population census data from the Palu Central Bureau of Statistics (BPS) was used to reveal the process of the accelerating population growth and its impact on people's lives and infrastructure in Palu (from the era of centralization to the era of decentralization). The Central Sulawesi Province Investment Data provided by the Regional Investment Cooperation Agency website was then used to observe changes in the structure of Palu's economy. Primary data sources used for analysis of the natural disaster were gained through interviews with people directly affected by the disaster (namely the Lere coastal community), agencies that played a role in the disaster are the Meteorology & Geophysics Agency, Regional Development Agency, and group institutions that participated in disaster management (namely volunteers). In-depth interview participants were chosen using the purposive sampling method and snowball sampling during the two periods of fieldwork. According to Miles and Huberman (1994, p. 27), samples in a qualitative study are not completely predetermined and can change once fieldwork begins. Purposive sampling is defined as sampling that involves a series of strategic decisions about where, how, and with whom the research is conducted. When using the purposive sampling method, the sample must be linked to the study's objectives, which means that the sample must be specific to the issues being studied. Sampling is used to gain a more comprehensive understanding of institutional arrangements, social interaction, and the interrelationships between resource owners and users. The number of participants is not known ahead of time. However, the sampling process was terminated when the interview results reached saturation, which meant that no new information emerged. During the fieldwork, the researcher found prospective interviewees through people who knew other people who had relevant information (MILES & HUBERMAN 1994, p. 28). Thus, the snowball sampling method was designed to collect data in order to achieve saturation.

Not all interviewees were pre-determined during the fieldwork. Following information provided by previous interviewees, the number of respondents increased throughout the fieldwork. Open-ended questions were used in the in-depth interviews. The interview's aim and scope were introduced and briefly discussed with each participant. It was clearly stated that the research was purely academic, with potential recommendations for further system improvements, but there were no direct benefits. The interviewees were given the option of remaining anonymous, which meant that their names would not be disclosed to third parties when the research was published/finalized. Overall, very few participants chose to remain anonymous. On the other hand, some participants were critical toward certain issues, which could have ramifications for them within their own organizations or with actors from different organizations. As a result, it was decided to standardize the process of reporting the interviewee's statements. Correspondingly, the names of the interviewees are not listed, however, their respective organizations are. The author did not record the interviews because it was clearly stated that the interview would last two to three hours (or more), and that there was plenty of time to write down the responses on paper. This benefited the author because it encouraged listening and understanding, as well as the opportunity to interact and stimulate discussions in order to delve deeper into various issues. Using a recording device would not have provided the same level of alertness and immediate grasp of the answers. Field observations were used to gather data on natural disaster damage remnants. The economic and social implications of the earthquake, tsunami, and

liquefaction were investigated. This included asset loss, business loss, and loss of livelihood, as these are all economic consequences.

3.3.3 Qualitative Data Analysis

A category system was first created based on the researcher's existing theoretical knowledge, concepts, and research questions. During actual data analysis, however, more categories and codes emerged. The data analysis procedure is based on Powell and Renner's (2003) description of the qualitative data analysis procedure. It is divided into five steps. Following an examination of the collected data, the second step of the analysis is concentrated on how all actors responded to each question within each topic (the development of Palu, the actors, the regulation, and the life after the natural disaster). All of the data from each question was organized together by paying close attention to the operational level of the actors (e.g. province, regencies, etc.). As the analysis progressed, a combination of techniques by time period, event, or case became necessary. The third step in the analysis was to categorize the data. This entailed identifying and grouping themes or patterns, then organizing them into coherent categories. As the categorization process progressed, new themes emerged and were treated as sub-categories. Identifying patterns, connections, and relationships between categories and their respective overall importance was the fourth step. The final stage of the analysis involved bringing all of the findings together for a final interpretation of the data and proposing new concepts and ideas.

3.3.4 Research Limitations

Some data related to the development of Palu before decentralization (1999), also known as the New Order era, were difficult to obtain because there had not been much research done on the development of Palu at the time, nor was data available from the era of centralization that assessed the performance of the government. As a result, comparing the situation in Palu from a socio-cultural and economic standpoint could only be obtained through in-depth interviews with community leaders, organizations, and the government. Furthermore, during the era of centralization, the data held by the

government was not in the form of digital data or recorded on a computerized system, so a large amount of data was lost or damaged over time. Another challenge was the study location's post-disaster situation: many informants from previous field excursions moved to other cities or died as a result of the natural disaster. Consequently, new informants had to be sought out that could provide the necessary information. Furthermore, following the disaster, the government did not collect the most recent data, hence the data available is from 2017. To obtain accurate data, researchers must be completely objective in selecting interviewees in order to obtain current and up-to-date information. In order to produce valid data, researchers must match primary data with secondary data, in addition to conducting interviews and observations in the field.

3.3.5 The Researcher's Position.

According to Lee-Treweek and Linkogle (2000), data collection in empirical social sciences poses four major risks to physical, emotional, professional, and ethical wellbeing. Concerning the fieldwork conditions, the latter issue is found to be particularly relevant, owing to the development-oriented project approach and the emphasis on qualitative research techniques. Every empirical social science development study conducted in (or on) other cultures raises ethical concerns. As a result, ethical concerns must be prioritized when conducting intercultural development research in any region of the world. It is also unavoidable for the researchers to include their own "personal potential" in the research (Seiffert, 2003, p. 257). Subjectivity of a researcher, on the other hand, is not regarded as an alarming variable that impairs research results; rather, it is regarded as a necessary part of the research process. Correspondingly, the researcher in that case must exercise caution in collecting and interpreting the data collected. The disaster that occurred at the research site during data collection caused a sudden shift in the topic of research objectives during the dissertation's preparation. As a result, the author included the events and aftermath of the 2018 earthquake and tsunami as one of the topics covered in this research.

4. Indonesian Policies during Centralization and Decentralization 4.1 Overview of Centralization Policy during the Sukarno & Suharto Eras

The era of centralization in Indonesia refers to a time when all of governmental authority was in the central government. All areas were regulated by the central government, so the role of the central government was very influential in various areas of public life (in both social and economic aspects), as well as in the intra-national political fields (GAFFAR, 2007). This era was marked by the leadership of President Suharto who led Indonesia from 1967 to 1998. In March of 1967, the People's Consultative Assembly (national legislature) elected him to a five-year term as president, effectively replacing Sukarno, the first president of the Republic of Indonesia. Since Suharto's elevation to the presidency in 1967, national elections for parliament were held on four occasions (in 1971, 1977, 1982, and 1987), followed by ten political parties participating in the election, nine from the Old Order (Sukarno era) and a new government party called Golkar (for *Golongan Karya*) which was formed in 1964 by the army to counter the increasing influence of the *Partai Komunis Indonesia* (Indonesian Communist Party) and its mass organizations at that time.

Golkar was a government party, representing in essence the mobilization of the civilian bureaucracy and the army. Golkar won 62 % of the votes in 1971 through a combination of effective army-bureaucratic penetration of the villages, harassment of the opposition, and playing on voters' fears and traditional habits of deference to authority (LIDDLE, 1973). In 1973, the nine parties were forced by the government to consolidate into two, the Muslim *Partai Persatuan Pembangunan* (Unity Development Party) and the nationalist plus Christian *Partai Demokrasi Indonesia* (Indonesian Democracy Party). This occurred because Suharto argued that there was no need for too many parties in Indonesia. He reflected on the failure of the constituent assembly from 1955 to 1959, where the entire parliament was chiefly arguing and insisting so that no decision could be made (DWIPAYANA, 1989). In fact, the leaders of both these parties were screened and their activities were monitored by the government. In 1977 and 1982, Golkar again won over

60% of the vote. In 1987, it won 73%, the jump being largely attributed to the decision of the *Nahdlatul Ulama* (the largest Muslim organization in Indonesia and the single biggest contributor of votes to the *Partai Persatuan Pembangunan* or the Unity Development Party) to withdraw from partisan politics (LIDDLE, 1988). After each general election, Suharto had been reelected president by a People's Consultative Assembly consisting of the members of parliament plus an equal number of regional and other representatives. These presidential elections were easy for Suharto to control. His party, Golkar, thus always had an absolute majority of the elected members of parliament. In addition, 20% of the seats in parliament were allotted to representatives of the military. The remaining half of the members of the Assembly were all appointed (LIDDLE, 1992).

Suharto not only designed the leadership in Jakarta, Indonesia's capital city, but also in the region through the issuance of Law No. 5/1974 on the principals of government in the region. Based on these laws, the power or authority of the region was limited and controlled by the Suharto regime at the time, which included impeding the election of regional heads. Governors were appointed by the president who selected qualified candidates. The procedure of selection was based on whether candidates were considered worthy by the People's Representative Council (PRIHATMOKO, 2005). Thus, regional heads were not selected democratically because the number of votes in the candidacy or the order of nomination did not prevent the president from appointing someone of his choosing. This rule was related to the interests of the central government in obtaining a governor or regent who would cooperate with the central government.

Concerning information, Suharto also exerted restrictions on the freedom of press in presenting news. Initially, Suharto claimed to make the Indonesian press 'free and responsible' and dedicated to 'national development'. However, the press was not allowed to disseminate ideas that were contrary to the interests of Suharto's government (ADISUBRATA, 2013). This culminated in the press release of the *Malapetaka limabelas Januari* (January Fifteen Catastrophe) of 1974. Suharto denied allegations made in newspaper reports that the President's family participated in a number of private

companies. The rebuttal was delivered in front of the board and members of the Board of Trustees of the Central Indonesian Journalists Association (Surjomihardjo, 2002). As a result, twelve newspapers lost their publishing and printing licenses, or were banned. Only two media outlets were eventually allowed to publish again, but only after a record number of staffs reshuffling and considerable downsizing (Hill, 2011). During the New Order era, the government was not only the dominant holder of power, but also the hegemonic holder of the collective consciousness and memory of the nation. During Suharto's reign, there was essentially no freedom of press (Wiratraman, 2011).

As president, Suharto instituted a policy he called the New Order, which relied on the help of American-educated economists to support Indonesia's economy. Western investment and foreign aid were encouraged, and Indonesia's domestic oil production was greatly expanded while the revenue generated was used to fund infrastructure and development projects. By 1972, Suharto had managed to restore stable economic growth while reducing the annual inflation rate from a high of 63 % in 1966 to less than 9 %. During Sukarno's leadership (the previous president), there was considerable hyperinflation that made Indonesia's economic situation at the time very unstable. In foreign affairs, Suharto pursued an anticommunist, pro-Western stance. Indonesia rejoined the United Nations (which Sukarno had left), and became a founding member of the Association of Southeast Asian Nations (ASEAN) in 1967 (BRITANNICA, 2008). Government programs were oriented toward inflation control, Indonesia's financial rescue, and securing people's basic needs. As a result, Indonesia managed to achieve selfsufficiency in rice production in 1984, as well as a poverty reduction, improved welfare through enrollment rates, decreased infant mortality rates, and rapidly increasing industrialization (FAREZA, 2016).

4.1.1 The Importance of the Transmigration Program

During the New Order, the Government made and enforced policies that were centralistic. This occurred due to various factors. Firstly, there were concerns about national unity and the emergence of forces that could potentially break up Indonesia's

unity. Secondly, centralization was regarded by many as a necessity in order to maintain security and political balance so that resources could be easily distributed, especially between Java, which was (and still is) inhabited by the majority of Indonesians and areas outside Java.

In addition to the economic differences between Java and other areas of Indonesia (such as those related to income, purchasing power, infrastructural development), the availability of schools, teachers, hospitals, and health workers were very limited in areas outside of Java, such as Sulawesi, Kalimantan, and Papua. In most of Java (especially in Jakarta), many people had access to sophisticated technological devices and adequate human resources. During centralization, the islands outside of Java went increasingly unnoticed. Uneven economic development began to spread to all sectors of life. People's lives were becoming increasingly difficult. As a result, there was considerable social inequality between people living on Java and people living outside of Java. In this sense, the knowledge and level of welfare and education was very different between inhabitants of Java and inhabitants of other Islands. The economic differences between various regions, professions, and classes within the society became increasingly heightened. Therefore, Java (and especially Jakarta) became the main destination in the 1980s for domestic immigrants from other islands who wanted to change their fortunes by studying, creating businesses, and working (ROMDIATI, 2016).

President Suharto was aware of the problem of population unevenness and unequal development between Java and other islands, therefore he continued the transmigration program that had previously been enacted during the administration of President Sukarno. The transmigration program of Sukarno's presidency did not focus on the excess population of Java because, at that time, the main purpose of transmigration was to maintain sovereignty in order to strengthen the brotherhood between the population of Indonesia. This was due to the fact that Indonesia has more than 300 ethnic groups (DAMM, 2018), Javanese are the largest group in Indonesia with a total of 41 % of the total population (SWASONO, 1986). Thus, during Suharto's leadership, the

transmigration program was primarily launched due to demography related issues, such as reducing the number of people on the island of Java and equalizing the population in areas outside of Java. At the beginning of the 20th century, Java was showing signs of 'phenomenal' demographic and economic changes. These were in part a result of the rapid growth of population dating back to the beginning of the 19th century, which coincided with increasing problems of poverty among Java's population (Tirtosudirmo, 1990). Apart from the demography-related motivations, the transmigration program was also expanded by supporting regional development, guarding borders, and opening new economic growth centers. Therefore, transmigration was promoted to remote areas on the islands of Sumatra, Kalimantan, Sulawesi, and Papua since, at that time, there were relatively few inhabitants there. This program was primarily intended for people living in Java with limited economic capabilities, though it was later used in areas other than Java, such as the islands of Bali and Sumatra, during the centralization era.

The transmigration program is a population-distribution program in which people are sent to areas outside of the island of Java to work in agriculture. Those who are sent from Java to other parts of Indonesia, particularly Central and Eastern Indonesia, are given a plot of land, which is used for agriculture or plantations. After arriving in a destination area, these government-assigned farmers received 20000 m² of agricultural land, houses, plant seeds, equipment, and were given food for a period of eight months (Nova, 2016).

During the era of centralization, the transmigration program was integrated into Indonesia's national development plans. The increased production of rice in order to achieve self-sufficiency was the main goal of the transmigration program during Suharto's leadership. Furthermore, agricultural production was expected to support the industrial sector as a development target. Hence, at that time, the transmigrants from Java who participated in this program mostly focused on agriculture. During the Suharto era, the overall success of the program was shown by moving 350,000 families per year on average. This achievement is undoubtedly due to the transmigration program being a permanent program that is always present in Indonesia's development plan and it is

updated every five years. In terms of self-sufficiency in rice production and increased agricultural production, this program was internationally recognized as highly successful, culminating in Suharto receiving an award from the FAO in 1984. However, it was still not able to counteract the increasing population on Java, because the rate of population growth on the island far exceeded the number of people who could be transferred through the transmigration program to other islands (Setiawan, 2006). Sine the transmigration policy had a considerably small impact on the reduction of Java's population, the unbalanced population distribution between Java and the other islands could only be marginally altered by transmigration (ARNDT, 1983). Thus, when regarding the effectiveness of the transmigration program in the terms of improving demographic distribution, this program did not reach its target (DEPARTMENT OF TRANSMIGRATION AND PPH, 1999).

While in the long-term transmigration has only had a marginal effect on population growth in Java and had little influence on population distribution in the archipelago, it had a tremendous demographic impact on the receiving areas (Tirtosudirmo, 1990). During the Suharto era, transmigration brought about several changes which led to progress for the transmigration destination areas. Before the arrival of the transmigration community, many areas were still fairly isolated because they were covered in forests or were empty and no infrastructure facilities had been built (LEGIANI & LESTARI, 2018). In 1985, for example, 25 % of the population in the regency of Kampar in the Province of Riau were transmigrants. In the regencies of Kota Baru in the Province of South Kalimantan, more than 40 % of the population were transmigrants (WORLD BANK, 1988). Therefore, internal migration is an important aspect in Indonesia's provincial economic growth, not only because of its magnitude but also because government policy has encouraged economic convergence in Indonesia (Vidyatama, 2008).

Apart from economic growth and food security, Suharto was also very concerned with the political and social security conditions of Indonesia. Government control was aimed at creating political and social stability; thus, the process of becoming a developed

country could be realized. The dominance and power of Suharto's regime was seen in various aspects of national affairs, which included the government's control over religious life (ROPI, 2017). Interventions that were carried out by the state were supported by Indonesia's military forces.

The military was the basis of Suharto's power and its influence permeated religious life. Diversity in religion within the nation was minimized by promoting a national identity with the aim of preventing conflicts stemming from religious beliefs and cultural differences. State policies related to religion were enacted during the New Order, such as the issuance of a joint decree in 1969 concerning the establishment of houses of worship. This policy was created to regulate the establishment of houses of worship so as to avoid triggering conflict (PANDAYA, 2006). However, implementation in the field shows that the rule was used to restrict non-Muslim groups, especially Christians, essentially making it difficult for them to establish new places of worship. One of the conditions that had to be met was receiving permission of other religious communities that lived in the near vicinity of where a new place of worship was to be built. As a result, non-Muslim religious groups would use places of residence as temporary houses of worship and this raised other issues with Islamic religious communities that surrounded these residences. The government's rules and policies regarding the establishment of houses of worship seemed somewhat unspecific, thus they gave rise to different interpretations in their application that ultimately triggered acts of discrimination, especially toward religious minorities (CROUCH, 2006).

In addition to religion, the influence of the government was also seen in its involvement in the lives of certain ethnic groups. During the New Order period, there were several discriminatory government policies, such as Circular Letter No.06/Preskab/6/6/67, which concerned name changes. In the letter, it was declared that people of Chinese descent should change their Chinese name to an Indonesian name, for example "Liem Sioe Tjong" to "Handoko", and that the use of Chinese names was also prohibited. In addition, to this, Suharto also limited the ordinances of worship that had

cultural aspects of China. Suharto did not immediately ban Chinese New Year celebrations for people of Chinese descent in Indonesia. During the Presidential Declaration of 1967, at one point he stated that "the celebrations of Chinese religious parties and customs should not be conducted in public, but rather in a familial environment". Thus, until this day, Chinese New Year or other important days in Chinese tradition are celebrate in a smaller scope, unlike the festivities of the New Year, Islamic New Year, or Christmas.

There were also restrictions that limited the number of ethnic Chinese that were allowed to study in the fields of medicine, machinery, science, and law at universities. This number was reduced to only 10 % (Hudayah, 2014). Since it was not easy for citizens of Chinese descent to gain the opportunity to work in the government or education sectors, most of them chose to set up their own businesses. Suharto had certain reasons why citizens of Chinese descent were limited in cultural and religious aspects. He assumed that the manifestation of Chinese religion, beliefs, and customs could have unnatural psychological, mental, and moral influences on Indonesian citizens (MIN SAI, 2013).

During the era of centralization, economic development in Indonesia caused an increase in wealth for certain businesses and groups of affluent people through corruption, collusion, and nepotism. The increasing practices of corruption, collusion, and nepotism in bureaucratic bodies, state institutions, and state companies carried out by the cronies of the Suharto family added to the increasing level of social inequality in society. This gap occurred because the services provided by the government to ordinary people were not the same as the services provided to cronies and their families, causing social jealousy and fragmentation (URBANINGRUM, 1999). Suharto focused exclusively on economic growth, gross domestic product, and economic strengthening to measure national development but ignored the negative effects of economic growth on society (as expressed through income inequality). Thus, despite the success of promoting economic growth, national development was fundamentally very fragile. Consequently, when there was an economic crisis in Indonesia in July of 1997, which was due to the impact of the global economy, the Indonesian rupiah's fall soon revealed the underlying weaknesses of

the Indonesian financial sector. Panic selling of rupiah for dollars by Indonesian companies with dollar-denominated debt revealed that private foreign debt was far higher than previously thought. The impact on many banks was rapid. The government liquidated 16 private domestic banks in November and the rupiah continued to fall far beyond all predictions (Sherlock, 1998). The most direct and widespread effect of the economic crisis on Indonesian society has been accelerating inflation. The fall of the rupiah also caused food insecurity since it occurred at the same time as one of the worst droughts Indonesia had experienced in many years. This caused rice production, which is a staple food of the country, to drop by 10 % (Luhulima, 2006). In addition to impacting food needs, the fall in Indonesia's currency and the consequences of private sector exposure to non-commendable foreign debt adversely impacted employment, especially in urban areas.

The industry that felt the most immediate impact was construction (where an estimated one million workers were laid off) because many short-term foreign loans were directed to city development projects and infrastructure (Sherlock, 1998). The banking sector collapsed and industries that provided services to new industries and consumers lost their customers. Most urban workers who lost their jobs were forced to make a living in the informal sector (street vendors, etc.), to rely on family support, or to find work in small towns. In rural areas, drought, rice shortages, and rising prices led to an increase in poverty rates. Moreover, disruption of services such as public transportation (due to rising fuel prices and shortage of imported parts) also affected the mobility of food distribution. Soaring prices caused many small businesses to go bankrupt or face drastic business declines. In light of the state's troubling condition, the demands for Suharto's resignation became the national agenda of the student movement. Eventually, the student movement proposed a reform agenda that received increasing sympathy and support from the people.

Suharto's government was further criticized after the Trisakti tragedy. The Trisakti tragedy was the result of a shooting of students on May 12, 1998, during a demonstration

demanding Suharto's resignation from his post. The incident killed four students of Trisakti University in Jakarta, as well as seriously injuring dozens more. This tragedy triggered the May 1998 riots that took place the following day. As a result, the student movement increased and expanded throughout almost all of Indonesia (HADIKOMORO, 1999). Under great pressure from both domestic and foreign countries, Suharto eventually chose to resign on May 21st, 1998. Precisely at 09.00 am local time, Suharto gave the presidency to the vice president, B. J. Habibie. This event marks the end of the New Order regime and the beginning of the reform era. After announcing his resignation, Suharto thanked and apologized to all of the Indonesian people. His three decades of undisturbed rule gave Indonesia much-needed political stability and sustainable economic growth, but his authoritarian regime eventually became a victim of economic downturn and internal corruption. During Suharto's 32-year rule, the economy was able to grow on average 7.4 % over the period from 1967 to 1996 and living standards rose substantially for most of the population, especially in Java. Success in economic growth and development during the Suharto era was marred by the distribution of the nation's wealth and uneven development between different groups and regions. The failure of centralistic policies in creating equitable development in Indonesia led to the creation of a new strategy that came to be known as decentralization (Aswicahyono, 2015).

4.1.2 Impacts of Centralization in Palu

A considerable number of regions throughout the country, especially those outside Java, felt their relative underdevelopment was unjust while their abundant natural resources continued to be exploited (Tadjoedin, 2001). Central Sulawesi is one of the many Provinces that did not develop as rapidly as Java during the Suharto era. At the time, in addition to the islands of Sumatra, Kalimantan, and Papua, Central Sulawesi became a destination area of the transmigration program. Palu served as the capital of this Province and, in the 1980s, the population of Palu was still relatively small and development was only concentrated in the city center. This meant that there was still a lot of vacant land around the city which was used as agricultural land for transmigration.

According to interviewees, the present-day suburbs of Palu represent the areas where migrants lived and created new agricultural land.

Palu was originally made up of the indigenous Kaili tribe, which has traditionally inhabited most of Central Sulawesi Province, especially areas in Donggala regency, Biromaru regency, and Palu. The main livelihood of Kaili people was farming rice fields and planting coconuts. Furthermore, Kaili people living at higher altitudes would go into forests to gather rattan, resin, and nuts, while Kaili people living near the coast lived as fishermen and tradesmen. In addition to the Kaili, there are other ethnicities that have historically inhabited areas around Palu. Some of these ethnic groups include the Bugis-Makassar, the Gorontalo, the Java-Sunda, the Mandar, and the Manado. Furthermore, there are other ethnic minority groups that live in Palu, such as the Toraja, the Chinese, the Banggai, the Arabs, the Ambon, the Dayak, the Banjar, the Batak, the Bali, and the Minang. There is not much literature or research available that reveals the history of migration to Palu before the centralization era, except the arrival of ethnic Arabs which is well documented due to the establishment of madrasah Al Khairaat (Islamic Boarding School) pioneered by Sayid Idrus bin Salim Al Jufri in 1930. He is known as a cleric who came to Palu in order to spread and teach Islam to the local people, which later became the primary reason why Arab tribes settled in Palu. The Kaili tribe is generally known to be open to immigrants. This is supported by the welcome the Kaili give to guests, including offering temporary land and distinctive woven fabrics as a tribute to the newcomers (RUHANA, 2012).

However, during the centralization era, many new ethnicities moved to the city as migrants that were supported by the transmigration program. The transmigration program initiated the arrival of ethnic Javanese migrants to Palu and its surrounding area. According interviewee 1, this ethnicity began settling in and around Palu since the transmigration program was launched in 1965 until 1969. Apart from Javanese migrants who came to Palu through the transmigration program, several migrants from other regions also migrated to Palu during the centralization era. Generally, they came of their

own volition in an effort to find better business opportunities in Palu. However, there were fundamental differences between the motivations and migration processes of different ethnic communities. According to interviewee 1, while most Javanese and Balinese were farmers in the early days of migration and they occupied new lands provided to them by the government that were mostly on the outskirts of Palu, Bugisnese migrants from South Sulawesi inhabited the coastal area located closer to the city center, with about 80 % of them pursuing livelihoods as fishermen. Meanwhile, Arab migrants who mostly came from Yemen moved to Palu because of their ancestors, namely Sayid Salim Al Jufri who had first come to Palu in order to establish Islamic education and spread Islam (RIANTO, 2019). Most Arab migrants later settled in the western part of Palu (which is also close to the coast). Whereas the Javanese, Balinese, Bugisnese, and Arab migrants of the centralization era were primarily migrants who came from outside of the Central Sulawesi region; this was not the case for the Chinese. This ethnic migrant group settled in the city of Donggala (approx. 34 km from Palu) before the Suharto era. They then started migrating to Palu in 1978 (RUHANA, 2012). Before then, they preferred to live in Donggala rather than Palu because Donggala was a trading center supported by loading and unloading ports during the 1970s. Thus, Chinese migrants decided to open shops that sold a wide variety of daily necessities as well as working in construction and automotive industries. According to interviewee 2, they first began to migrate to Palu from 1978 to 1983 after the port of Donggala was relocated to Palu. Once they moved to Palu, they continued working in the same businesses and industries as they had in Donggala.

Apart from the effects of migration, the development and population growth of Palu during the centralization era was also influenced by the establishment of Tadulako University. Tadulako University was opened in 1963 in Palu's city center with the status of a private university until 1980. Then, in 1981, it changed its status and became the only state university in Palu and its location shifted to the periphery of Palu (Tadulako University, 2021). The establishment of Tadulako University was one of the major causes of population growth in Palu. The change in status from a private to a state university

attracted the interest of many students who came from outside of Palu. Furthermore, the university also had a significant impact on the urban population, which was previously dominated by indigenous people and became more diverse with the arrival of students from other regions. The transition in the community surrounding the university was also reflected in the various types of employment opportunities found in the area. This is known from the interviews with people living around the campus site. Interviewee 1, a 67-year-old man who is a native of the Tondo region (where Tadulako University was built), stated the following:

Sebelum tahun 1996 masyarakat Kaili di Kelurahan Tondo pada umumnya berpenghasilan dari pekerjaan kuli bangunan atau pembuat kapur dan menangkap ikan di laut, karena pada saat itu, tidak ada perkembangan atau pembangunan yang baru disekitar lokasi kampus saat ini. Dulu lahan ini hanya rumah-rumah penduduk dan lahan perkebunan yang dibuka dan dibangun secara swadaya oleh warga setempat., barulah setelah berdirinya Universitas tadulako banyak masyarakat Kaili merubah profesi menjadi tukang ojek sebagai pekerjaan tambahan. (Interviewee 1, February 20th, 2018).

He said that before 1996, the community around the campus generally earned their income from farming, building mines or lime making, and catching fish in the sea since, at the time, there were no new developments around the current campus site. In the past, the land only contained people's houses and plantations that were built by local residents. After the establishment of Tadulako University, many of the locals became motorcycle taxi drivers as a source of secondary income and some even began working as non-lecturer employees in Tadulako University. This was partly due to agreements that were made between the local community and the university at the time of land acquisition. It was agreed that the University would prioritize employing local people that lived around the campus area.

Today, the majority of the population around the campus makes their living by working as civil servants. Accordingly, the existence of this campus has had an economic impact on the surrounding local community by supporting their livelihoods. This is exemplified by the creation of entrepreneurship through the provision of housing for

students, trade, furniture making, and other businesses. This information was obtained from interviewee 3, a 50-year-old man, who stated:

Setelah berdirinya Universitas Tadulako, kami merasa saat senang karena diberi pekerjaan oleh pihak kampus walaupun hanya sebagai cleaning servis, saya merasa bahwa pembangunan universitas Tadulako telah membuka lapangan pekerjaan bagi saya dan beberapa teman saya yang pengangguran (Interviewee 3, February 20th, 2018).

He stated that, after the establishment of Tadulako University, local resident who lived around the university were happy because they got a job on campus even though it was only as a cleaning service. He felt that the construction of Tadulako University had created many employment opportunities for him and some of his formerly unemployed friends.

Similarly, to interview 2 and 3, the same questions on how living conditions of local people around the campus site changed after the establishment of the university were asked to several other informants and similar answers were obtained. Interviewee 4 said that:

Setelah ada kampus Tadulako, banyak pendatang masuk ke wilayah Tondo sini. Karna mereka lihat banyak peluang untuk buka usaha yang dibutuhkan sama mahasiswa atau seperti bikin kos-kosan, warung internet, fotokopi atau kantin. (Interviewee 4, February 20th, 2018).

After the establishment of Tadulako University, migrants came to Tondo regency because they saw the potential of great opportunities to open up businesses that could support the needs of the campus and its students (e.g. dormitories, internet cafes, photo copy & print shops, food stalls, etc.). Hence, the transformation of local people's employment opportunities is apparent.

Population growth in Palu is in line with the need for housing facilities and other infrastructure. Based on the data obtained, the number of buildings and the level of land use for buildings in Palu from 1970 to 1990 has increased significantly, although the rate of growth tends to decrease when compared to the previous year's periods (see fig. 5). From 1970 to 1980, the number of buildings in Palu increased by an average of 6.73 % per year, indicating that within 10 years the number of buildings increased from 14,032 to

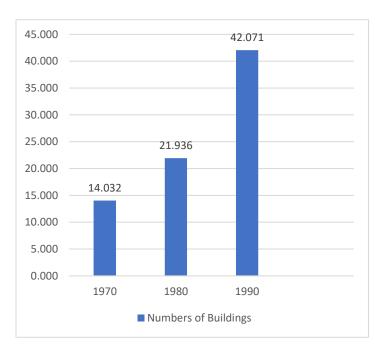


Figure 5: Number of Buildings in Palu from 1970 – 1990

Note. Graph indicates the increase in the number of buildings from 1970 to 1990, with the highest growth from 1980-1990. From: Palu Central Statistics Agency, kota Palu Dalam angka, 1999

21,936 building units. By 1990, it had increased to a total of 42,071 building units. During the era of centralization, Palu's population increased quite rapidly, especially since the government issued the transmigration program. In 1980, the population of Palu amounted to 99,531 inhabitants and, in 1990, the population of Palu was 199,445 inhabitants, indicating a large increase in the population within a 10-year time span (BPS, 2010).

Population changes that occurred during the era of centralization can be seen by the increase in building units and their distribution (see fig. 7). Areas in gray represent areas that were empty or had not been developed since they were dominated by dense vegetation and forests from 1970 to 1980. Areas marked in red represent areas that were inhabited and contained building units. This is essentially the core of Palu, which represents only about 5 % of Palu's current extension. Understandably, the number of inhabitants during the 1970s was relatively meager compared to today. At that time, there were only a few infrastructural facilities in Palu, such as Masovu Airport (now known as Sis Al Jufri Airport), Old Market in Ujuna sub-regency, and Palu I Bridge, which was the only bridge between the western and eastern parts.

From the information above, it can be inferred that the physical development in Palu from 1970 to 1980 seemed to follow a concentric pattern. During this time, the development of Palu contributed to a moderate population density that was

concentrated in the city center since the city settlements and facilities were located relatively close to the main roads that existed (see fig. 6). As of 1990, the development in the downtown area became increasingly denser, especially in the old areas located in Besusu and Ujuna regency, as well as the areas bordering these two regencies. The development of the city was in line with the increase in its population. Data obtained from the Central Bureau of Statistics of Palu found that the number of inhabitants in 1990 was 199,445 (BPS, 2011).

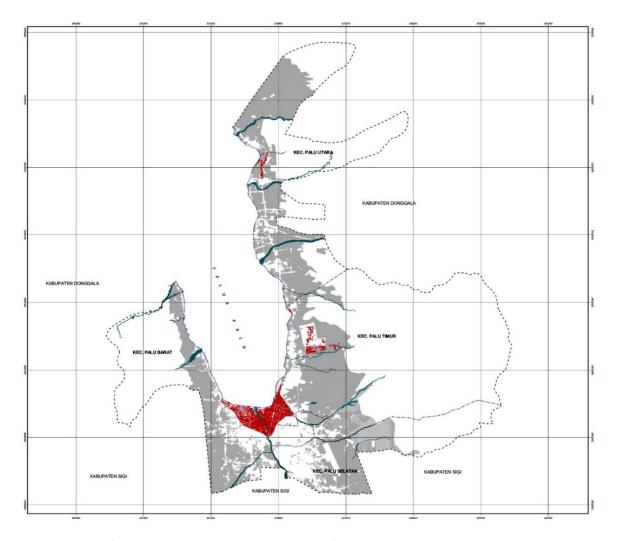


Figure 6: Map of buildings and their distribution in Palu from 1970 to 1980

Note. The distribution of building in Palu from 1970-1980. From Model penggunaan lahan untuk bangunan berdasarkan ketersediaan lahan dan kapasitas, studi kasus: Kota Palu [Land use model for buildings based on land availability and capacity, case study: Palu City]. Amar Ali, 2011. Hasanudin University. Reprinted with permission.

Population growth in Palu was followed by a growth in the number of settlements. The city center contained denser settlements, resulting in the formation of marginalized areas on the Palu River. Land prices close to the city center also increased. The first informal settlements on the Palu River's banks appeared in 1973. Palu was growing at the time, and a bridge connecting East and West Palu was built. Between 1978 and 1994, Palu became the center of inter-provincial trade and Central Sulawesi became a regional hub for all of Sulawesi, resulting in more migration to the area, resulting in an increase of 60-70 % of marginalized areas along the Palu riverbank (ASTUTIEK, 2000). It was also observed

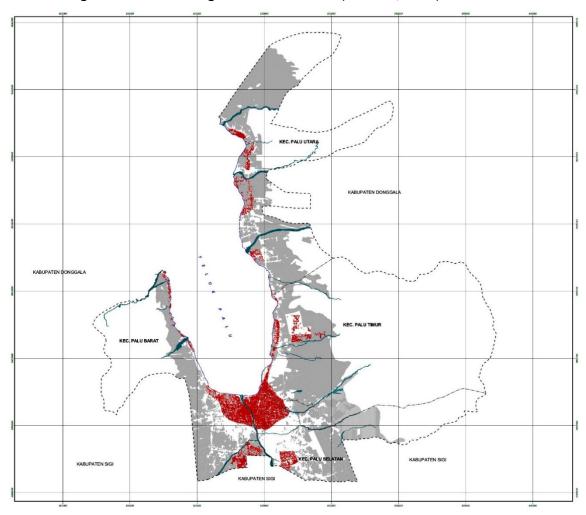


Figure 7: Map of the building unit distribution in Palu from 1980 to 1990

Note. The distribution of building in Palu from 1980-1990. From Model penggunaan lahan untuk bangunan berdasarkan ketersediaan lahan dan kapasitas, studi kasus: Kota Palu [Land use model for buildings based on land availability and capacity, case study: Palu City]. Amar Ali, 2011. Hasanudin University. Reprinted with permission.

that, despite many residential areas being located in the city center (built areas) in the 1990s, some sub-regional centers began to grow and develop on the outer perimeter of the city.

Based on the spread of the residential areas in Palu during the 1990s (see fig. 7), the city was still dominated by concentric patterns but also showed signs of leap-frog patterns. The leapfrog is one type of urban sprawl. Leapfrog propagation is a type of development that leaps around, has no pattern, and has no connection to previously developed land, and, if left unchecked, will have consequences such as increased travel time and environmental pollution. The formation of leap-frog patterns at this time occurred because of the construction of Tadulako University and its supporting infrastructure, such as roads, electricity, and the availability of clean water. Moreover, this pattern was supported because the vacant lands on the outskirts of the city began to transform into new residential areas. This was due to the price of the land, because housing developers in Palu were looked for land at the lowest price that could be purchased with ownership status in the form of property rights (MARDIN, 2011)

In 1994, Palu was inaugurated as the first medium-sized city in Central Sulawesi. Along with the change in the status of the government, the condition of the economy changed. This change began with the influx of migrants (not from the transmigration program) who realized the city's considerable potential (HALIADI, 2019).

In 1993, the service sector became Palu's leading economy by contributing 28.56 % to the gross regional domestic product. But the sector declined in the following years nearing the end of the era of centralization. In addition to the service sector, other leading sectors in Palu were trade, hotels, restaurants, transportation, and communications (see fig. 8). The influence of the economic crisis in 1998 was one of the causes of the decline in the construction sector.



Figure 8: Growth Rate of GRDP of Palu from 1993-1999

Note. When the construction sector grew, the agricultural sector shrank, indicating that the use of agricultural land had changed. the individual figures in the graph are based on changing borders and territory delimitations that have shifted over time. Adapted from (BPS, 2002).

4.2 Urban Change during the Decentralization Era

Indonesia transitioned from an authoritarian to a parliamentary and, simultaneously, a presidential system at all levels of government, from central to local (Matsul, p. 1–9) as a result of the reform movement in 1998. President Suharto was replaced by his vice president, B. J. Habibie, who later served as the third president of the Republic of Indonesia with a term of office that lasted from Mai, 1998, until October, 1999. Habibie served quite briefly because there were reform demands from activists and student movements that the presidential election be accelerated. After six proforma elections to reelect President Suharto over the previous three decades, Indonesia held a democratic election in July of 1999. Both the domestic and international communities praised the election campaign and citizens' active participation during the campaign and on election day (Pardede, 1999). A new general assembly was formed based on the election that elected President Abdurachman Wahid as the new Indonesian President in

October of 1999. While there were only 3 political parties during the Suharto era, in the 1999 general election, there were 48 political parties (MASYROFAH, 2013). This was because the 1997 election that Suharto won was considered invalid and the ranks of ministers in charge after his resignation, including Habibie, who was then serving as vice president, were considered still inherited from the New Order. When his term ended, Habibie refused to be re-nominated as a presidential candidate. Although Habibie's term of office was less than two years, he was able to increase the rupiah exchange rate from IDR 17,000 per US dollar in January, 1998, to IDR 6,700 per US dollar in June, 1999. However, the rupiah depreciated again at the end of Habibie's term to IDR 8,000 per US dollar (RICKLEF, 2008).

4.2.1 Decentralization and Regional Autonomy

During the rule of President Habibie, decentralization became the main agenda that was carried out to respond to the expectations of people who wanted development results to be obtained fairly and evenly for all Indonesian citizens. Decentralization was implemented in Indonesia for a variety of reasons. Social, political, and economic motivations are among them. For example, in the era of Suharto's government, international pressures and voices dissatisfied with the implementation of the centralization system and that opposed the authoritarian regime forced the government to decentralize more power to the regional governments (DARMAWAN, 2008). Momentum was gained with the launch of the 1999 package of laws on local governments which had significant implications and led to changes in the central-regional relationships. These changes led to a shift from a centralized system of government to a decentralized one through the regional autonomy. The new policy of decentralization and regional autonomy is outlined in Law No. 22/1999 concerning local government and Law No. 25/ 1999 concerning the fiscal balance between the central government and the regions (SYAIKHU, 2002). These laws were crucial aspects that led to a change in the pattern of government organization. During the time of the decentralization era, regional autonomy was carried out with increased democracy, so that the distribution of income from natural resources or regional wealth between the central and regional governments was also tailored to the needs of the various regions in order to improve their welfare. Furthermore, the implementation of regional autonomy was expected to minimize the threat of disintegration of the nation.

During the decentralization era, Indonesia increased its number of Provinces from 27 to 34. Since the autonomy of regions, many areas experienced the creation of new Provinces, such as the Mamuju region which had been previously part of the Province of South Sulawesi and was later separated to become the Province of West Sulawesi. This Province is led by a regional head called the Governor. In the decentralization era, regions had authority over all aspects of the regional government, except sectors concerning foreign politics, defense, and authorities related to security, judiciary, monetary, fiscal, and religious sectors as stated by the Law on Regional Autonomy No. 22/1999 as follows:

Kewenangan otonomi luas adalah keleluasaan Daerah untuk menyelenggarakan pemerintahan yang mencakup kewenangan semua bidang pemerintahan, kecuali kewenangan di bidang politik luar negeri, perrahanan keamanan, peradilan moneter dan fiskal, agama, serta kewenangan bidang lainnya yang akan ditetapkan dengan Peraturan Pemerintah. Di samping itu, keleluasaan otonomi mencakup pula kewenangan yang utuh dan bulat dalam penyelenggaraannya mulai dari perencanaan, pelaksanaan, pengawasan, pengendalian, dan evaluasi.

This law resulted in regions obtaining an abundance of responsibilities in many government affairs that were previously in the hands of the central government in Jakarta. One of the most important changes that resulted from regional autonomy laws, which were later updated in Law No. 32/2004, was the establishment of direct regional head election rules by the people (Ismail, 2014). The direct election system is a system in which local people can elect their local leaders directly. This system is not regulated by the previous law No. 22/1999 on local government. Law No. 22/1999 gave the authority to local assembly members to elect the local government heads. The election by local assembly members had been perceived by many as inciting corruption and bribery, thus giving a bad name to local democracy (Rudy, 2017). In contrast, during the era of

centralization, a governor was appointed by the president through elections in the regional people's representative council, which was also controlled by the President.

After the collapse of the New Order rule, the first general elections were held in June, 1999, in accordance with the demands of the people under the government of President Habibie. The 1999 general election appointed Abdurrahman Wahid as president and Megawati Sukarno Putri as vice president. Abdurrahman Wahid is known as the founding cleric of the Islamic organization Nahdlatul Ulama. This organization is known for its figures who often resisted and criticized the policies issued during Suharto's rule (DAMM, 2018). Abdurrahman Wahid began his rule by trying to reduce the discrimination against Chinese customs and culture. President Abdurrahman Wahid also included Confucianism as one of the officially recognized religions in Indonesia so that Islam, Protestantism, Catholicism, Hinduism, Buddhism, and Confucianism became the six officially recognized religions of the country. During President Wahid's rule, the Chinese New Year was also recognized as a national holiday in 1999 in order to honor people of Chinese descent. Wahid also attended the Chinese New Year celebration in February, 2000, in Jakarta. Overall, the Chinese were very happy with the inclusion of Confucianism as one of the recognized religions in Indonesia and hoped that the discrimination that occurred during the era of centralization would not continue (MUSTOPA, 2020).

4.2.2 Decentralization and Impacts on Socio-cultural Dimensions

Decentralization changed many socio-cultural aspects of Indonesian society that were established during the centralized era; this in turn had several political and economic impacts. One example of a significant change was the social involvement of Chinese people in Indonesian society. They generally became active in sectors related to education and health. Many people of Chinese descent pursued professions as teachers, lecturers, professors, doctors, engineers, lawyers, judges, prosecutors, advocates, and even police officers and soldiers, all of which were professions that were rarely pursued by this ethnic group. In the field of education, they established various schools, ranging from kindergarten to high school, as well as various universities (FAISAL, 2019).

Furthermore, during the decentralization era, people began to make use of their freedom of speech by voicing their various concerns regarding government policies or regulations. This was supported by reforms in the field of communication. The revocation of the decree to request a publication license for printed mass media resulted in the press no longer having to worry about being banned or censored (as had occurred during the era of centralization). Although religious freedom and the circulation of critical ideas began to improve, the social life of Indonesians was marked by various social conflicts of ethnic and religious nature in the early days of decentralization.

One of the largest conflicts that marked society occurred in Poso, a city in Central Sulawesi. The conflict started just a few months after the fall of the Suharto regime and lasted for 2 years (from December of 1998 to December of 2001) (AWALUDIN, 2009). Although Poso had been inhabited by Christian and Muslim immigrants since pre-colonial times, most of the new migration occurred during the New Order due to the construction of trans-Sulawesi roads as well as the construction of ports and airports. These migrants came from North and South Sulawesi. As previously stated, prior to the outbreak of the conflict in 1998, Poso's population was almost evenly divided between Muslims and Christians (BPS, 1998). By the later stages of the conflict, beginning in 2000, mobilization was overtly along religious lines, and clashes between groups during this period were described as inter-religious warfare by many locals (BROWN & DIPROSE, 2006).

The majority of the Christians involved in the conflict were of the Pamona ethnicity, with smaller groups of other ethnicities from the highlands. The Muslims were primarily coastal Bugis, Gorantalo, and, later in the conflict, Javanese. While many members of these three ethnic groups have lived in the area for generations, some still regard them as newcomers. As a result, ethnic divisions coexisted with religious divisions during the conflict, and this was exacerbated by an 'us-them' discourse that centered on who could be considered 'local' and who could be considered as a 'newcomer' (DIPROSE, 2008, p. 10). Clashes between Muslim and Christian youths sparked the first and second phases of the Poso conflict and riots. However, it is claimed that many other factors

contributed to the outbreak of sectarian conflict, which resulted in a massacre, destruction, and arson (Agustina, 2009).

The total population in Poso at the time of the conflict was 209,228 people. During the conflict, hundreds of people were seriously injured, 300 to 800 were killed, and nearly 150 bodies have been burned, beheaded, and dumped into the Poso River or other mass graves. At least 3,500 homes, two schools, and nine places of worship were destroyed in twenty areas. More than 70,000 people fled their homes. In July of 2000, Poso was almost empty, oftentimes referred to as the dead city (ARAGON, 2001). With constant waves of violence throughout the conflict, the people of Poso fled to areas marked by a majority of their respective religions. For the Muslim community, many chose to flee to Palu and the South Sulawesi region, while Christians fled to Tentena and Napu in the mountains, or to Manado in North Sulawesi (Purwanto, 2007). The Poso conflict had substantial influences to the population growth on surrounding areas such as Palu. Located roughly 205 km from Poso, Palu and its surroundings became the main destination of Poso refugees. The number of refugees eventually began to decline and gradually decreased since the Malino Declaration. The Malino Declaration was a peace treaty implemented by the government of Indonesia on December 20th of 2001 in Malino, South Sulawesi. The treaty brought together the Christian and Islamic parties fighting in Poso. Poso regency's Office of National Welfare & Politics reported that by mid-July 2002, 43,308 of Poso's displaced residents had returned home, representing about 40 % of the estimated 110,227 refugees (WALHI, 2000). Many of those who had fled from Poso did not return to their homes and, instead, chose to stay in Palu because they had already found good employment opportunities and due to psychological trauma (WALHI, 2000).

In Palu, there were also some conflicts that arose between indigenous peoples and migrants. These migrants began to arrive as a result of the transmigration program and increased in the era of decentralization with the expansion of regions and the opening of several new job vacancies (Mursid, 2019). There was a significant conflict that occurred in 2001 in the Manonda traditional market of Palu. It involved the Kaili ethnic group as

the original ethnic group of Palu and the Bugis ethnic group, which is made up of migrants who came from South Sulawesi. This conflict started because of a fight between drunken youths from Bugis and Kaili tribes which later led to two young men of Kaili ethnicity being seriously injured and one dying. This resulted in the Kaili burning down the Manoda market, which was targeted because of its majority Bugis presence and control. The conflicts between the Bugis and Kaili in the Manonda traditional market of Palu occurred because of resentment felt by the Kaili (the native ethnicity of Palu) toward Bugis that dominated many economic spaces. Migrant ethnic groups, such as Bugis, Makassar, Mandar, and Toraja, control 80 % of the economic sector in Palu, the rest is controlled by the Kaili community.

Ethnic Chinese are the ones who benefited greatly from the implementation of the autonomy system in Palu. Ethnic Chinese, who make up no more than 2 % of Palu's population, still dominate in business and economy as was the case in other cities in Indonesia. In addition to the Chinese, another ethnic group that plays an important role in the business field in Palu is the Bugis. These migrants from the southern part of Sulawesi control almost all traditional markets in the city of Palu. Bugis and Javanese migrants, as well as Kaili people, became informal economic actors in Palu (Mahfud, 2020). No less than 5 times was there a conflict between Kaili and Bugis ethnic groups in Palu. However, the conflict in Manonda Market is considered quite large because it involved citizens of both ethnic groups (Kaili and Bugis) on a wide scale. Due to fear and anxiety, a large number of ethnic Bugis people around the scene were forced to evacuate to other places to avoid the possibility of becoming victims of violence. The conflict occurred again in July of 2009, but it was smaller than before (Anriani, 2018). Meanwhile, for other ethnic migrants, such as Chinese, Arabs, and Javanese, there has never been a major clash like the one that occurred in the Manonda Market.

Nevertheless, there are several other kinds of conflicts that occurred quite frequently. These kinds of conflicts did not affect the overall social life of Palu's inhabitants since they were able to continue carrying out their daily activities as usual. An

informant from the Kaili tribe, a 30-year-old man, responded to the migrants' presence from a local resident's point of view. He stated:

Saya yakin saja nanti akan terlihat siapa yang lebih kuat atau siapa yang lemah, waktu yang akan menjawab hasil dari setiap usaha yang dilakukan. Tidak boleh marah dengan keadaan saat ini, kalo marah akan membuat jelek nama orang Kaili, nanti jadi jelek dimata orang luar. Terus saja perbaiki diri nanti bisa bersaing sama orang pendatang. (Interviewee 5, February 19th, 2018).

He stated that he had no problem with the presence of migrants because he was sure that one day it would be revealed who was strong and who was weak. Over time, the ability of Kaili people would be seen. Indigenous people should not be angered by the gap that exists between migrant incomes and their own incomes because anger will ultimately damage the image that others have of the Kaili. They understand that they must continue to improve their abilities and to effectively compete with migrant settlers. Some migrants, such as Javanese, who initially occupied agricultural land and plantations in the suburban areas of Palu, began buying land close to the city center. There, some of them were able to mingle with other migrants and local communities, as well as work as traders and office workers. Over time, the composition of the population in Palu became increasingly heterogeneous. However, most migrants tended to occupy certain areas and live among their ethnic group. As such, various areas of Palu became marked by different ethnic groups; the areas in the city that are dominated by specific ethnic groups can be observed in figure 9.

The pink-colored areas on the map are Kabonena, Silae, and Tipo regency. These areas are located on the outskirts of Palu and are dominated by the original inhabitants of Palu, namely the Kaili, who used to live in the center of the city. Because of the large number of migrants who came and bought their land, this ethnic group ended up buying land in the suburbs that cost less. The orange area on the map contains Kamonji and Balaroa regency, which are dominated by migrants of the Kaili and Bugis ethnic groups. Bugis that once dominated the coastal area began to spread and settle in this area, where

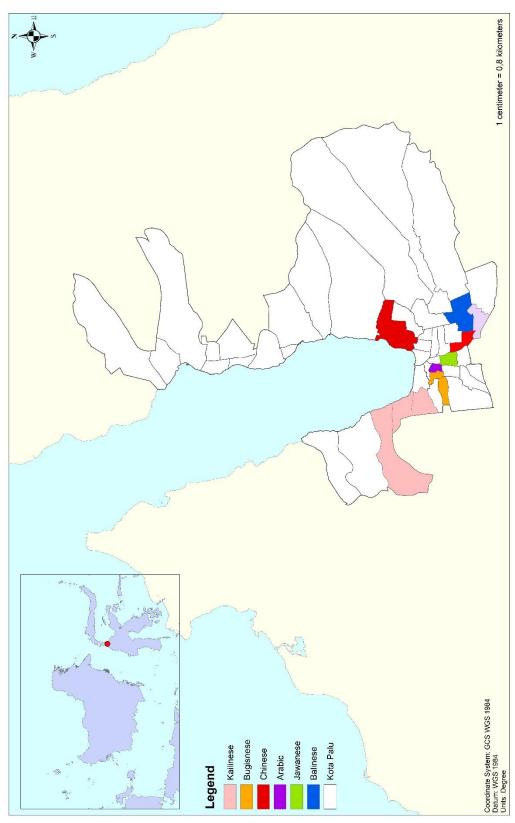


Figure 9: Map of migrant distribution based on ethnicity in Palu

Note. Figure shows the population distribution pattern in Palu, with each ethnic group dominating a specific area. Own elaboration with data from Global Administrative Areas (2018) and OpenStreetMapcontributors (2015).

today the Manonda traditional market is found. The red area represents the regencies of Talise and South Tatura, which are dominated by the ethnic Chinese. This area is a business regency where most of the buildings contain shops and other businesses. The purple area on the map represents the regency of Siranindi, where ethnic Arabs dominate the area. This regency is also known by the name of *Kawasan Wisata Religi* (areas where people visit to worship and learn about history related to Islam). This part of Palu is marked by Islamic educational institutions such as Alkhairaat, mosques, and the grave of the founder of the Alkhairat Islamic foundation.

Furthermore, there is an old mosque relic of Sis Al Jufri, a clerical figure who is known for spreading Islam throughout Central Sulawesi. On the map, the area that is colored green is Nunu regency, which is dominated by Javanese people. This is a residential area that formed as a result of Palu's expansion. The blue area on the map is the North Birobuli regency, a residential area that is inhabited by many Balinese. Similarly to the Javanese, this ethnic group originally came to farm around Palu through the help of the transmigration program but eventually began to work in various sectors that were unrelated to agriculture, according to the account of interviewee 6.

The term migrant is a term used by Kaili people to describe those who do not have blood ties, were not born, or are not married into the Kaili ethnic group. The Kailinese constructed a new identity that they refer to as the *Orang Palu*, which translates to "local people" (LAMPE, 2010). Once migrants have lived in Palu for an extended period of time, they oftentimes define themselves as *Orang Palu* (especially those who have married locals). Migrants that live in Palu because they followed their parents or came to find a better life also refer to themselves as the "local people" if they feel like they are contributing to Palu's development. Nonetheless, even though they recognize themselves as local people, many still form their own ethnic or regional organizations. For instance, the Javanese have an organization called *Ikatan kelurga Jawa* (Javanese Family Ties) and many migrants from other regions, such as the Bugisnese, have also formed ethnic associations in their respective settlement areas. Contrastingly, ethnic organizations of

Kaili people do not exist in Palu. Although migrants born in Palu or those that have lived for more than 15 years in the city declare themselves as *Orang Palu*, this only serves the purpose to make it easier for them to socialize with the local people through some similarities, such as having similar accents and wearing traditional clothing during official activities and family events.

Trying to socially adjust by using regional languages and accents during social interaction with local people is an effort to connect migrants. Nevertheless, since regional autonomy was imposed, it is rare for people other than the Kaili or Palu natives to hold important positions in local government, such as governor, mayor, or head of the local assembly. This can be seen from the names that occupy important positions in government or political institutions in Palu, as they are dominated by local ethnic clans. This was stated by a 47-year-old male informant. He is a local assembly member from Minahasa tribe, which is one of the tribes originating from North Sulawesi. He stated that:

Saya kalau ditanya selalu saya bilang saya orang Palu tetapi kelahiran Manado karena sudah belasan tahun disini. Meski nama keluarga atau klan lebih banyak dibicarakan dalam konteks pemilihan kepala daerah (pilkada) dan rekruitment pejabat di birokrat pada tingkat kabupaten, kota dan provinsi, namun faktanya pengaruh marga pada nama pada kontestasi pemilihan anggota dewan Kota Palu masih menjadi salah satu jaminan keterpilihan dan dalam penentuan jabatan. (Interviewee 6, March 23rd, 2018).

During the interview, he stated that, whenever asked where he came from, he would always answer that he was born in Manado but was from Palu because he had been in the city for over a dozen years. He argued that family names or clans were often talked about in the context of the election of regional heads and the recruitment of officials in bureaucratic positions at regency, city, and provincial levels. The influence of last names in winning an election of Palu Councilors is still very powerful in gaining a political position.

In addition to the opinions of the local community on the presence of migrants, information was also obtained from a migrant who had moved to Palu from Ternate, a city in north Maluku Province. He was one of many entrepreneurs that owned a famous

bakery and had lived in Palu for decades. He stated the following concerning what prompted him to choose Palu as a place to resettle:

Bagi saya kota Palu sebagai kota penuh toleransi ditengah keragaman tingkat Pendidikan, sebab dikota ini merupakan kota pertemuan berbagai etnis dan keyakinan yang dianut warga kotanya dari berbagai belahan daerah, seperti warga asal Sulawesi Selatan, Sulawesi Utara, Gorontalo dan daerah lain dan sebahagian besar pendatang bukan hanya sekedar singgah tapi sudah lama bermukim dan menjadi penduduk. Mereka semua turut berperan membangun mewujudkan Kota Palu menjadi salah satu kota termaju di Indonesia melalui peranan masing-masing termasuk pengusaha didalamnya (Interviewee 7, February 24th 2018).

In his opinion, Palu is a tolerant city in the midst of diversity between education levels. Likewise, Palu is a transit city where various ethnicities and beliefs are embraced by the citizens of the city. People from various parts of the region can meet (such as residents from South Sulawesi, North Sulawesi, Gorontalo, and other areas). Most of the migrants settled and became residents of Palu. They all played a role in creating Palu to become one of the developed cities in eastern Indonesia through their various roles.

4.2.3 Decentralization Impacts on Palu's Demography

The demographic determinants (births, deaths, and migration) in Palu, contributed to the population growth rate in Palu. Over time, the population of Palu has continued to increase through birth and migration. The influx of the migrant population in Palu almost equals the number of the non-migrant population, as shown in the diagram below (see fig. 10).

The number of births in Palu has been higher than the number of deaths for the past 5 decades (Dinas Kesehatan Kota Palu, 2017). According to the data presented above, the determinant of migration contributed significantly to Palu's population increase. Many factors influence the decision to migrate; for instance, the availability of migrant networks, differences in income, and demographic factors are key determinants of migration (SIMPSON, 2017).

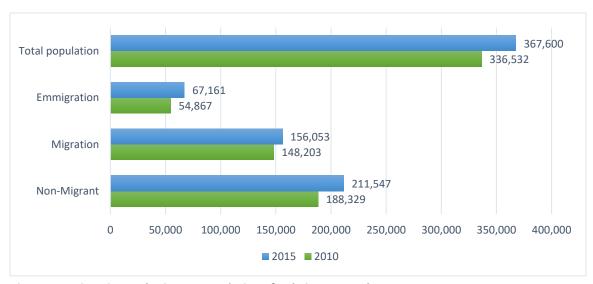


Figure 10: Migration and Migrant Population of Palu in 2010 and 2015

Note. The graph shows the role of migration to Palu's population growth between 2010 and 2015. Adapted from Palu Central Bureau of Statistics 2010 & 2015.

Based on the interviews conducted during this study, the population that migrated to Palu was prompted by economic factors. The main push factors were poverty and overpopulation, particularly among those who migrated from Java Island, while the primary pull factors were the increased demand for labor as the number of investment

and employment opportunities in Palu increased; thus, the total population of Palu increased from 336,352 in 2010 to 379,782 in 2017 (see fig. 11).

The population increase from 2010 to 2017 represents a growth rate of 1.61 %, while the growth rate of Indonesia's population was 8.0 % during the same period (BPS, 2014). This is in line with Mita Noveria's (2010) statement that population

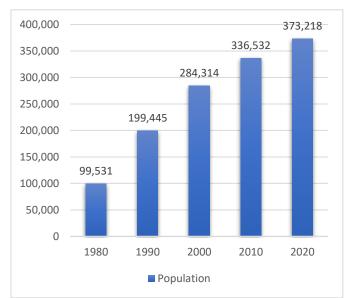


Figure 11 :Palu's Population Growth from 1980 until 2020

a's (2010) *Note*. shows the population growth of Palu over the past 5 decades. Adapted from Palu Central Bureau of Statistics books population 2010 & 2015.

migration (from village to city) is the dominant factor that causes high population growth in urban areas, especially within cities of medium-sized categories, in Indonesia. Based on Palu's population growth data, it is presumable that Palu has enough manpower to support business activities from various sectors.

The continued migration to the city also has a positive value because it is considered as one of the largest contributors to the workforce. The head of Palu's BPS stated that the proportion of Palu's productive population in 2020 was 69.02 %. Compared to 2010, this proportion increased from 68.96 % (BAPPEDA, 2020). This population structure can be one of the supporting factors in urban development when the ratio of the productive population is relatively large (SARMIATI, 2019). For instance, the results of the census conducted in 2020 showed that the majority of the population in Palu was dominated by generations born between 1997 and 2012, with 8 to 23-years-olds making up as much as 31.25 % of the total population (BPS, 2021).

4.2.4 Decentralization and Economic Restructuring

Economic growth indicators in Palu are determined by the Gross Domestic Product (GDP), the overall income of the community, the level of employment and unemployment, and the population's welfare as measured by the impact of distribution of goods and services. The economic growth of Palu increased from 2012 to 2013, this is because the tertiary sector's contribution to Palu's GDP has increased. In 2013, the construction sector was rapidly growing due to many developments that began that year, such as the construction of the gas company PT Donggi-Sinoro, various hotels, real estate such as Citra Land, the construction of the Grand Mall Palu, and the expansion of the Airport. However, growth in the economy tends to be inclusive because the benefits of growth are not distributed evenly across various community groups, as evidenced by growing income disparities (SHANDRA, 2013).

Palu's economic growth rate began to decreased from 2015 onward. The head of Bank Indonesia's representative office for Central Sulawesi said that the decline was due to a decrease in mining production and export performance following the issuance of a

central government policy, which essentially banned the exportation of raw minerals and coal. Furthermore, a decline in the performance of the plantation subsector was another major factor in the deterioration of Palu's economy (BANK INDONESIA SULTENG, 2014).

Human development and economic development are frequently linked. Increased economic growth can lead to future increases in output and income, raising the Human Development Index (HDI). The ability to transfer economic growth into enhanced human development is one of the most important development challenges. Because human development, or the quality of human resources, is so important, efforts to improve the quality of human resources in development have become a necessity. The quality of a region's human resources plays a role in its management success. In contrast to previous eras, Zahir (2022) states that, after 26 years of decentralization, nearly half of all districts and municipalities in Indonesia experienced a 5 to 10 % increase in HDI. Table 1 indicates the most recent data on Palu's economic growth and the HDI.

Table 1. Palu's Economic Growth (GRDP) and HDI

Economic Growth and Human Development Index in Palu, Period 2012-2020		
Year	Economic Growth	HDI
2012	9.44	78.10
2013	8.81	78.36
2014	9.18	78.65
2015	8.89	79.12
2016	7.74	79.63
2017	6.12	79.73
2018	5.86	80.24
2019	5.05	80.91
2020	4.58	81.50

Note. This table depicts economic growth (GRDP in percent) and the Human Development Index's growth over an eight-year period, from 2012 to 2020. Where economic growth appears to fluctuate while HDI appears to continue to rise. Adapted from Palu Central Statistics Agency 2020

During the period from 2012 to 2020, Palu's economic growth fluctuated, with only a small increase or decrease each year. Meanwhile, the HDI in Palu has been steadily rising from 2012 to 2020, with the highest HDI of 81.50 recorded in 2020.

Figure 12 identifies the sectors that became predominant during the decentralization period and displays the annual contributions made by each sector to GRDP. If the service sector decreased at the end of the centralization era, it increased during the decentralization era. While the construction sector followed the same pattern as the previous era, with an increase in the construction sector accompanied by a decrease in the agriculture sector, this was due to a reduction of agricultural land size because of the transformation of farmland into housing or industry areas. Accordingly, many people switched their professions from farmers to the secondary or tertiary sector. The services sector as well as the trade, hotel & restaurant sector increased in line with the rise in investment and tourism in Palu (ADYATAMA, 2018). This phenomenon shows a

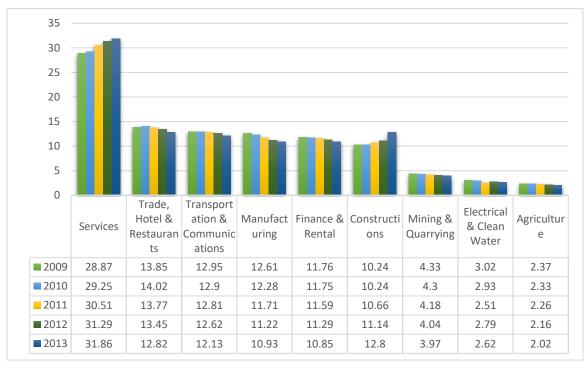


Figure 12: Economic Sectors in Palu from 2009 - 2013

Note. The economic sector that contributed the most to Palu's economy from 2009 to 2013 was the tertiary sector (also referred to as the service sector). This sector dominated and boosted the city with an average contribution of 28.48 %, followed by the trade, hotel, and restaurant sector that contributed 13.43 %. Own elaboration with data of the Palu statistic agency 2014.

shift in the economic structure of Palu's inhabitants from the primary sector to the secondary and tertiary sectors, although the rate of this shift is still relatively small. This is supported by the declining contribution of the primary sector (with a relatively low growth rate), while at the same time the contributions of the secondary and tertiary sectors are continuously increasing (with relatively high growth rates). Thus, it can be observed that the leading sectors in Palu during this time span are the services sector, the trade, hotel & restaurant sector, as well as the transportation & communication sector (Tenggara, 2015).

Subsequently, the composition of dominant businesses in Palu shifted in 2016. In that year, the three most dominant business categories were the wholesale trade industry, the hotel & restaurant industry, and the manufacturing industry. This has also had an impact on the changes in business fields that absorb the most labor (BPS, 2016). Trade is still the dominant sector in Palu since it is supported by geographic factors. Because of its location, Palu became a distribution channel for goods and commodities that were supported by facilities, such as intercity terminals between provinces, ports, and airports serving national routes; thus, Palu became a gateway of the economy in Central Sulawesi. This has certainly had an impact on the emergence of traders (both large and small) (BPS, 2017).

The urban and economic development of Palu cannot be separated from the role of investors. Domestic investments in Palu have been approved and some investment projects have absorbed more. The development process of Palu significantly increased from 2005 to 2010 due to the entry of investors in Palu, which is reflected by the construction of shopping centers, hotels, the airport, harbor expansions, continuous infrastructural improvements, and lastly, the establishment of Palu as a special economic zone known as *Kawasan Ekonomi Khusus* (KEK) in 2014. The KEK is located in the Tawaeli regency of Palu and has an area of 15 km² that consists of three zones, namely the industrial zone, the logistics zone, and the export processing zone (Dewan Nasional KEK Republik Indonesia, 2017). The KEK of Palu is focused on developing the nickel, cocoa, and

seaweed processing industry. Palu Bay is relatively deep and wide, which enabled this region to become a route for national and international trade, including connecting cities in Kalimantan, Sulawesi, Maluku, Papua, and other ASEAN countries. There are 21 companies that are currently in operation or under construction (IRSHANDI, 2019). These are both national and international companies, such as Hong Thai International from China and Hashimoto from Japan. Coupled with the opening of this special economic area, the influx of investments in Palu has had a significant influence on its economy and urban development (KHAIRIL, 2018).

The private sector's importance as an investor in Palu must be supported by assurances of security and regulations that do not impede investors. Growth in business competitiveness necessitates the development of a framework that supports productive assets to gain a more competitive market share (PARWATA, 2004). In an interview on April 24th, 2018, a businessman in Palu stated that certain conditions in the management of business licenses made him less interested in working with the government. Illegal levies by local government employees continue to plague the government, bringing a negative image to the institution. This occurred frequently in 2013, causing investor interest to dwindle.

Dalam pengurusan surat perijinan kadang masih ada saja oknum Pemda yang minta dikasih jatah preman, pungutan liar begini yang bikin kami ini pengusaha sudah berpikiran negative lebih dulu dan malas untuk berurusan sama pemerintah, ini banyak kejadian di tahun 2013 sehingga minat investor berkurang (Interviewee 8, April 24th 2018)

Despite this, the regional government secretary of Central Sulawesi, explained in an interview that investors played an important role in Palu's development:

Investasi merupakan salah satu faktor utama yang mempengaruhi perkembangan ekonomi suatu wilayah. menambahkan investasi juga menjadi faktor penting dalam mempercepat pembangunan dan penciptaan lapangan kerja. "Investasi menjadi salah satu fokus pembangunan pemerintah sebagaimana tercantum pada rencana kerja pemerintah tahun 2018 yaitu memacu investasi dan infrastruktur untuk pertumbuhan dan pemerataan (Interviewee 9, February 25th 2018).

He stated that investors were important for Palu in accelerating development and job creation. Investment is one of the main focuses of development for the regional government of Central Sulawesi as contained in the government's 2018 work plan, which is aimed at spurring investment and infrastructure for growth and equality.

Increased investments also had a positive impact on the lives of Palu's residents. The availability of jobs can help alleviate poverty. The poverty rate decreased from 2014 to 2015 (see fig. 13). According to the Palu's BPS (2019), the poor are residents with monthly per capita expenditures below the poverty line, which is a minimum expenditure value for food and non-food needs that is used to classify the population as poor; the number of residents who can only afford to earn less than US\$ 32 per month are officially considered poor. Based on the data of the Central Sulawesi Statistics Agency (2022), starting in 2011, the number of poor people in Palu decreased 3 years in a row, then subsequently increased from 2014 to 2015 due to a rise in the price of national necessities (PUTRA, 2018) and then increased from 2018 to 2019 due to the disaster. The increase in poverty is said to be in line with the increase in the number of social inequalities in the Palu community (BPS, 2017).



Figure 13: Total number of people living in poverty in Palu between 2012 – 2019

Note. Own elaboration with data of the Palu Central Bureau of Statistics 2010 & 2015

4.2.5 Impacts of Decentralization on Palu's Urban Transformation

Economic restructuring has had significant implications for urban development in Palu. Since the municipality acts as a center for trade and services, there are a large number of job opportunities within Palu. Many residents have attempted to relocate closer to the core in order to find more affordable housing, but the core lacks land and is relatively expensive. This condition then stimulates speculative behavior, not only of individuals, but also of housing development firms looking for opportunities in housing markets. Along with the increase in the number of residents in Palu, the need for land also increased, especially the use of land for buildings. During the era of decentralization, the number of buildings in Palu increased by an average of 1.89 % per year from 2000 to

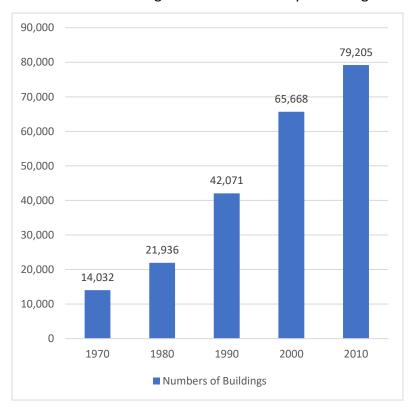


Figure 14: Number of buildings in Palu from 1970 – 2010

Note. The data obtained shows that the number of buildings in Palu increased significantly from 1970 to 2010. Adapted from: Amar Ali, Model penggunaan lahan untuk bangunan berdasarkan ketersediaan lahan dan kapasitas, studi kasus: Kota Palu, 2011

2010. This is delineated by an increase in the number of buildings from 65,668 to 79,205 building units in an interval of 10 years (see fig. 14). The highest increase in the number of buildings in past 5 decades occurred from 1980 to 1990.

Figure 15 below depicts the development distribution and of buildings they as continued increase to from 1970 to 2010. Buildings are marked in

red, indicating that the urban area of Palu has developed toward the North and South,

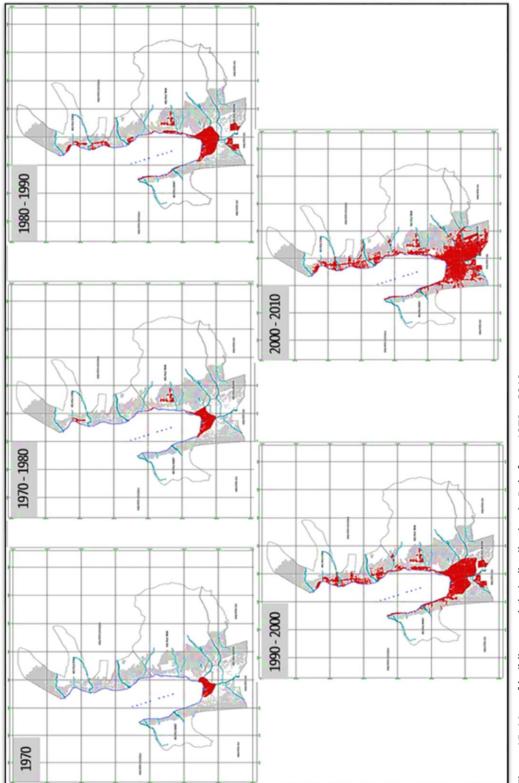


Figure 15: Map of buildings and their distribution in Palu from 1970 – 2010

Note. The distribution of building in Palu. From Model penggunaan lahan untuk bangunan berdasarkan ketersediaan lahan dan kapasitas, studi kasus: Kota Palu [Land use model for buildings based on land availability and capacity, case study: Palu City]. Amar Ali, 2011. Hasanudin University. Reprinted with permission.

where the distribution of buildings dominates the lowland area surrounded by hilly edges. Growth in the number of buildings is in line with the influx of migrants to Palu, either through the transmigration program by the government or by their own efforts (MUAMAR, 2017).

Palu has become denser since 2005, exhibiting the phenomenon of building developments that appear scattered (AMAR, 2011). This pattern of development can be classified as interstitial development, namely the development of the city that leads to the periphery area (ZAHND & MARKUS, 2009). Settlement development has been found as the main cause of physical changes in Palu Region (see fig. 16).



Figure 16: New Residential Areas in Palu's Periphery

Note. Photographs A, C, D, and E show low-income housing on Palu's outskirts. Figure B shows a middle-to upper-class home with excellent infrastructure features that was constructed by the national developer *Ciputra Group* on a seaside close to the city center. Source: Photographs taken by author, 2018.

The growth of new settlements dominated the increase in the number of buildings in Palu from 2000 to 2010, with around 83 new settlements built by developers during that time period (Muamar, 2017). The development of housing that is quite significant in Palu is inseparable from economic growth. The Regional Secretary of Central Sulawesi, said:

Setidaknya ada 2 pengembang besar yang masuk di Palu, salah satunya Ciputra Grup yang kemudian membangun kompleks perumahan Citra Land yang sudah lama mengembangkan perumahan-perumahan kelas menengah ke atas, akhirnya masuk juga di Palu, karna melihat potensi kota Palu yang kondusif dan menjanjikan untuk profit dibidang perumahan (Interviewee 10, February 25th 2018).

Based on the results of interviews, there are at least two large developers who entered Palu, one of which is the Ciputra Group that later built the Citra Landhousing complex. Ciputra Group, which has long developed middle to upper-class housing, finally entered Palu because they saw the potential of the city, which is conducive and promising for making them profit.

The development of economic activities in Palu from 2000 to 2010 occurred primarily in industrial activities, trade and services, as well as building settlements (which was supported by the availability of open land that is still widely available). Land transfer affects the physical condition of the city by making it denser and giving rise to new road network patterns in new residential areas. Thus, it can be said that the development of economic activities in Palu affects the structure of urban space (MUAMAR, 2017). Palu's physical development and population growth are paralleled by the expansion of both planned and unplanned residential environments. The planned housing settlement provides adequate infrastructure but requires a significant financial investment to own a house. As a result, low-income residents prefer to live in illegal settlements in the city center, such as those along the Palu River.

According to data from the Central Statistics Agency for Palu in 2015, this regency's population was 7,978 people. This area is very dense due to the population growth along the river, which is uncontrolled. From a socioeconomic standpoint, the

facilities are generally in poor condition, and the majority of the community works in the informal sector with low income levels. The majority of the residents in this area came from outside Palu to join their families and search for jobs. This is the effect of the city's attractiveness, which influences people's decision to stay in Palu. The lower middle class chooses riverbanks as locations for illegal settlements because the river is the easiest and most open location for low-income groups to develop residential areas. This condition is also supported by the river's function, which is very supportive for survival, hence the cost of living can be reduced (Suwarno, 1991). Another reason given in an interview by residents living along the Palu River was that the location was close to their source of income (such as for street vendors, buskers, or beggars).

Kita pilih tinggal disini karna saya rasa lebih enak, ke tempat saya berdagang lebih dekat. Ada juga orang disini yang kerja sebagai pengemis atau mengamen di pertokoan yang lokasinya tidak jauh dari sini (Interviewee 11, February 23th 2019).

Low-income residents build non-permanent housing in this area and use it for several generations; thus, it becomes crowded over time because the number of families living in this area continues to grow while the area or size of the site remains fixed (Kustianingrum, 2010). Informal housing environments are frequently devoid of adequate infrastructure, such as clean water and sanitary sewerage. As a result, when the rainy season arrives, the marginalized area along the Palu River frequently floods. This informal settlement along the Palu River was revitalized in 2000, but it still appears shabby and congested because the government's revitalization has not yet reached all informal housing areas in the location. The people in the informal settlement area fully support the revitalization of their residential area.

Interviewee 12, a local resident, stated that residents who live around Palu River would follow and support the government's program to revitalize the riverbank area, even if they had to be relocated to another residential location. This would only be done, however, if the residents felt that they had the government's support.

Kita ini Cuma masyarakat biasa yang hanya bisa mengikuti peraturan dari pemerintah jika akan dilakukan penataan kembali pada permukiman disini, kami sangat setuju, atau

juga bias jika kami dipindahkan dan diberikan tempat tinggal yang baru yang lebih layak (Interviewee 12, February 23rd 2019).

When talking about the growth of economic activity, an interviewee revealed that the existing revitalization to his housing area was limited to the physical structure, and even then, it did not extend to the local residents' homes. Only the river embankments have been repaired. Apart from physical revitalization, local residents also require economic improvement. Many want to start a business, but they don't have enough money:

Kami sangat senang jika ada pengembangan aktifitas perekonomian di permukiman kami. Kami ingin mambuka usaha tapi tidak punya modal (Interviewee 12, February 23th 2019).

According to the findings of the interviews, the majority of the people who live in informal settlements work as construction workers, street vendors, buskers, and scavengers. With jobs like these, their earnings are also low.

4.3 Earthquake and Tsunami 2018

On September 28th, 2018, at 18:02 local time, an earthquake with a magnitude of 7.4 hit Central Sulawesi; the epicenter was located at 0.256° South Latitude and 119.846° East Longitude, around 77 km from Palu, and 20 km below the ground surface (MIYAJIMA, 2019). It was followed by a tsunami warning by the Meteorology, Climatology & Geophysics Agency. This earthquake triggered a tsunami that hit the coast at 17:22 WIB.

4.3.1 Description of the Natural Disaster in Palu

There are 2 Provinces that were directly affected by the earthquake and tsunami: Central Sulawesi Province (4 cities: Donggala, Palu, Biromaru, and Parigi) and West Sulawesi Province (North Mamuju regency) (BNPB, 2020). On October 30th, a total of 2,081 fatalities were reported and more than 4,400 people suffered severe injuries (see fig. 17). Furthermore, an estimated 68,451 houses were damaged, and at least 206,494 people are currently displaced (MIYAJIMA, 2019). At a glance, the destruction seems random. Driving North from Palu along the coast of the bay, most villages appear to be fine, then suddenly one finds whole areas destroyed by the tsunami or drowned in mud where the land below liquefied. The National Disaster Management Authority (BNPB)

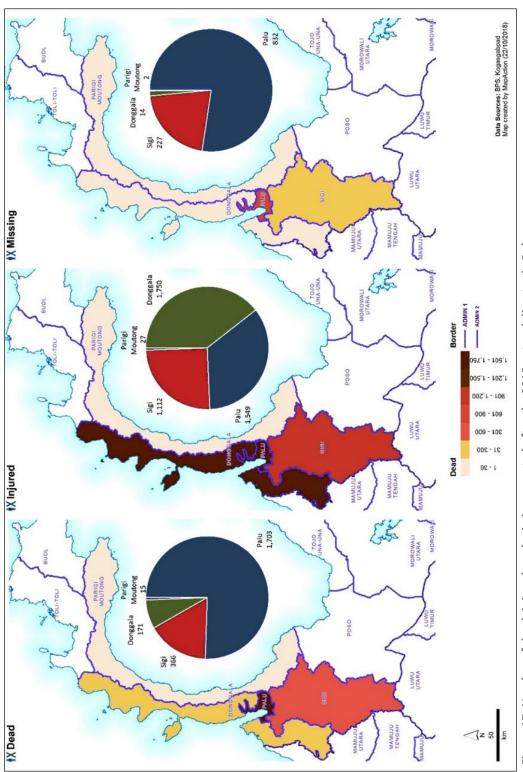


Figure 17: Number of dead, injured, and missing reported after the 2018 natural disaster in Palu

Note. Disaster-affected areas are depicted, along with a classification of the dead, injured, and missing. Sulawesi Earthquake, 2018, Copernicus Building Damage Classification. From MAP ACTION. https://maps.mapaction.org/dataset/sulawesi-earthquake-2018copernicus-building-damage-classfcn. CC-BY 4.0. estimated the total cost of material damages at US\$ 910 million. The catastrophic events that took place in Palu exhibit some unique characteristics compared to other similar natural disasters in Indonesia, especially those related to the tsunami.

The tsunami that ravaged Central Sulawesi showed some differences compared to a tsunami that hit Aceh in 2004, and it also generally differed from how most tsunamis take place (ALISHA, 2020). Ordinarily, a tsunami is understood as an incident that is initiated by an earthquake followed by low tide and then large waves returning to the mainland with a longer wave intensity, so as to produce tall waves when approaching land (PRASETYA, 2012). Although earthquakes are usually followed by tsunamis, in the case of Palu, it was followed by a liquefaction incident.

The vulnerability of Palu and its surroundings to earthquakes and tsunamis is not new. Studies have shown that Palu and its surroundings have experienced earthquakes and tsunamis several times since they began being recorded in 1927 (DARYONO, 2011). Liquefaction is also not a new phenomenon. However, the occurrence of three simultaneous disasters in the same area is an unusual experience for the residents of Palu (TAKAGAWA, 2019). Earthquakes and tsunamis effectively cut Palu's communication from the outside world for several days. In addition to the disconnected power grid, the airport runway and control tower were also damaged. Pantoloan Port, which is relied on for fuel supply, lost its crane for cargo loading and unloading. Debris and landslides also blocked the main road that leads to other areas such as to Makassar in the North, to Poso in the East, and to Gorontalo in the South. Some of the villages affected by liquefaction were submerged to the ground (HCT INDONESIA, 2018). On October 4th, the electric network gradually recovered in some parts of Palu. However, the fuel for vehicles, generators, and water pumps was insufficient so that these could not be used. Residents in Palu reportedly had to queue for up to two hours to access drinking water. Shops and markets were still largely closed and health facilities reportedly ran out of medicines and essential supplies (TAKAGAWA, 2019).

Through the BNPB and the Ministry of Foreign Affairs, on October 1st, 2018, the government of Indonesia received international assistance in line with the humanitarian needs identified in the field. The government of Indonesia has significant experience and capacity in dealing with natural disasters in the region, but due to the scale and complexity of the post-disaster situation in Palu, UN agencies and NGOs were working with the Indonesian government ministries to provide all necessary technical support. It was reported that most of the deaths were caused by the rubble of collapsed buildings and by the direct impact of the tsunami in coastal areas (HCT INDONESIA, 2018). The coastal area was nearly completely destroyed. Almost all of the buildings located in this area suffered heavy run-down due to the foundation shifting, thereby crumbling the skeleton of the buildings and skewing them. The coastal defense was heavily damaged as a result of the tsunami, as well as the subsidence of the coastal zone. Several ships that were docked crashed onto the shores and hit people's homes (Kusumah, 2018). The landslide and earthquake occurred anywhere between 18:02 and 18:13 local time, then followed by tsunami at 18:21. The warning was terminated at 18:36 local time after receiving water level data from the tidal gauge at Mamuju that showed a tsunami height of 6 m. Shortly after the earthquake occurred, electrical and telecommunication networks were interrupted, thereby adding to the panic of the people (UNDRR & UNESCO-IOC, 2019). As previously mentioned, this earthquake was not the first to take place in Palu, but the magnitude of 7.4 was the strongest ever recorded and experienced by citizens. When the natural disaster occurred, respondents stated that they escaped for safety to secure locations. People who lived on the coast attempted to flee to higher ground. Residents that were at higher altitudes of the region, on the other handed, tried to save themselves by descending to the lowered flat land. In an emergency, most people would self-rescue based on an instinct to save themselves. Some respondents even stated that they saw an arrow indicating an evacuation route but did not follow it because they did not know the meaning of the arrow. After escaping to a safer location, some inhabitants moved around before settling in a refugee camp. According to a study conducted by Dalimunthe (2018),

most residents moved at least two to three times to find a safe area and were able to meet their needs during the evacuation phase. All of the interviewed victims recounted the events of the natural disaster and spoke about the effects it had on them and the city.

Interviewee 13, a 62-year-old man who has lived in the valley of Palu for over 30 years, said that earthquake and tremor occurrences are common place for him as well as other people in Palu. Similarly, interviewee 14, a 65-year-old woman who settled in Palu about 5 years ago, stated that she did not expect the extraordinary events of September 28th, 2018. One of the witnesses and disaster victims, interviewee 16, told the author that, during the incident, he was in a second-floor café building near the beach Talise. When he felt the terrible vibrations during the first earthquake, he and other visitors of the café ran to the ground floor. Although he fell several times, he was eventually able to save himself by getting out of the building before it was destroyed by a more devastating aftershock. Interviewee 15, a 29-year-old male resident of Palu, stated that, at the time of the earthquake, he was in front of his store and he watched as people panicked. They were running in various directions, some people ran toward a nearby open field, some groups ran toward the mountains. Those who took their vehicle tried to drive as far away as possible from the city center. Interviewee 15 further said that:

Orang-orang yang naik motor banyak jatuh pada saat gempa terjadi. Ini salah satu yang bikin banyak korban luka disamping karna kena material bangunan yang runtuh. Setelah gempa, listrik mati semua, jaringan telepon juga mati bikin situasi semakin panik. Malamnya saya lewat di pinggir pantai talise semua hancur, saya juga sama sekali tidak bias kontak keluarga saya, mama saya dan saudari saya. Cuma setelah itu ada signal dari salah satu provider tapi hilang-hilang signalnya (Interviewee 15, May 6 th 2019).

He explained that, during the earthquake, many people who were on the highway were riding motorcycles and they fell because of the shock of the earthquake. This was also one of the main causes of injuries apart from being exposed to the rubble of buildings or other objects.

When the disaster struck, electricity and telecommunications were completely cut off. The system at that time was completely paralyzed and resulted in a situation that was

out of control. Interviewee 16 said that, during the earthquake, the electric power transmission system was immediately cut off. In the evening, he headed toward the beach and saw that it was already destroyed. Although he was trying to make sure his family (his mother and sister) were alright, he was unable to contact anyone at the time. After 48 hours, one of the cellphones providers's networks was able to reconnect and he was finally able to contact his family. All of the residents that were interviewed during the research said that, for roughly 10 days, while they were in refugee camps, they did not receive any help or see any activity from local government authorities. Only volunteers from several humanitarian and religious organizations were there to aid them. Some chose to leave Palu to the nearest province using motorized vehicles. This included many government officials who left Palu due to the disaster. In a span of 3 days, during the absence of aid from the government, communities fulfilled their needs together. One of the respondents mentioned that there were some people who were able to return to their home a few hours after the tsunami and then shared their food with other victims. The effort of communities to fulfill their own needs was also carried out by looking for places that had plants, such as cassava and corn. Survivors deliberately searched for places that could immediately fulfill their need for alimentation.

The response of Palu's inhabitants was dominated by spontaneity and subsequent actions were heavily influenced by various information that was circulating and received through social media as well as word-of-mouth communication between fellow survivors. Residents avoided disaster- and tsunami-prone areas by choosing to evacuate to the highlands since emergency refugee camps built by volunteers were only available 3 days after the disaster occurred. In these emergency camps, inhabitants tended to group together based on familial relationships. They chose to gather at the same emergency camp location. This was done due to family members believing in being able to strengthen each other in unity, thus facilitating the recovery process. Especially those who lost family needed the support of other family members to take care of them. One of the victim's families in Jono Oge said that his wife passed away during the disaster and, thus, he

moved in with his mother-in-law and a toddler who both survived. Staying with a large family was very helpful in keeping each other company and assisting in meeting basic needs. Many residents decided to stay in refugee camps because they were not allowed to return to their homes and also because it was easier for them to get food and life support in order to gain access to temporary residence. Some inhabitants who suffered minor damages to their residence chose to return home. The people who chose to remain in the evacuation area still tried to visit their homes, especially those still standing despite the damage. Some residents were guarding their houses because the looting of homes became an increasingly widespread issue.

4.3.2 Disaster Management Efforts by the Local Government

Indonesian government pre-disaster preparations include the Disaster Risk Assessment document. For the period of 2016 to 2020, this document is available for Central Sulawesi, Palu, and Donggala regency. The period of 2017 to 2020 also includes Sigi District. The 2018 natural disaster caused the most devastation in three Central Sulawesi regions (Triyanti, 2022). Following the earthquake and tsunami that struck Central Sulawesi, the government implemented various disaster management efforts in an emergency response in order to speed up recovery for the community and the Central Sulawesi region. This response and recovery effort is divided into three stages: emergency response, rehabilitation, and reconstruction (PEMDA KOTA PALU, 2018):

- 1. Emergency Response (September 28th October 26th, 2018)
 The Governor of Central Sulawesi established a 14-day disaster emergency response period following the occurrence of the disaster. This emergency response phase, however, was later extended and ended on October 26th, 2018.
 During the emergency response period, the government prioritized four activities: victim evacuation & search, medical services for disaster victims, basic needs & logistics for refugees, and infrastructure improvement & general services.
- 2. Rehabilitation (October 26th December 26th 2018)

At this stage, the government restored functions of buildings and infrastructure that were urgently needed to follow up on the emergency response phase, such as mosques, hospitals, basic social infrastructure, and much-needed economic infrastructure and facilities. The primary goal of this rehabilitation phase was to restore adequate public services. During this stage of rehabilitation, efforts were also made to resolve various problems related to legal aspects, such as land rights, and those related to psychological aspects, such as dealing with disaster victims' trauma.

3. Reconstruction (December 26th 2018 – December 26th 2020)

At this stage, the redevelopment of urban, rural, and regional agglomerations was being carried out with the participation of disaster victims, experts, non-governmental organization representatives, and business leaders. The construction of infrastructure and facilities began with the completion of the spatial plan adjustment, both at the provincial level and at the regency and city levels that had been damaged (particularly in coastal areas). The primary goal of this reconstruction phase was to rebuild areas and communities that had been directly or indirectly affected by the natural disaster.

In order to deal with post-disaster conditions, rehabilitation and reconstruction efforts were prepared by the central government. The rehabilitation and reconstruction planners were conducted by considering the strategic location of Palu as the center of economic activity. The planning was done by the National Development Planning Agency which collaborated with the Indonesian National Disaster Management Authority. The official plans for rehabilitation and reconstruction were structured by balancing aspects that integrated physical conditions, the environment, and supporting infrastructure. One of the planned arrangements was related to the resettlement plan or special relocation for disaster victims who were unable to return to their homes. This occurred because their residences were either directly impacted by the liquefaction or because the location of their residences was within the disaster-prone areas (PEMDA SULAWESI TENGAH, 2019).

However, the government's resettlement program has not always shown success. Some of the resettlements failed to improve communities' recovery because they could not fulfill the needs of the residents. Hence, many chose to leave the relocation area and returned to their original housing locations, even though they were in disaster-prone locations. One example is the post-tsunami relocation in Pantoloan, where most of the families that were resettled returned to their old dwelling site or discovered other areas that were preferable to the relocation area. One significant factor that promoted this was the lack of adequate basic facilities, such as electricity and clean water. Moreover, the failures of resettlements were mostly due to the fact that the planning processes was often unsystematic and tended to ignore the psychological and cultural aspects of the people that were displaced (RAFLIANA, 2014).

Scudder (2012) suggests to use four phases in a resettlement process, beginning with the process of planning, followed by adjustments, population formations, and finally the complete handover to the community. During these four stages, mentoring or supporting facilities are provided to victims for increased success of the transitional period (Scudder, 2012). Not only is paying attention to the four phases important for the rebuilding of a settlement, but also considering aspects of risk that could arise. The eight potential risks are loss of land tenure, loss of work, loss of residence, marginalization, threat of food security, increased mortality and pain rates, reduced access to shared property and natural resources, as well as the changing of social systems (Cernea, 1995). When linked to post-disaster conduct, the people-centered approach is becoming increasingly important. This is because people that are victims of natural disasters not only suffer material losses but also experience psychological problems, such as trauma, thereby making post-disaster management (especially the rehabilitation stage) more complex (RAJINDRA, 2019). Generally, people hope to not only return to their former lives, but to also have a better situation than before the disaster event.

4.3.3 Impacts of the Natural Disaster in Palu

The disaster destroyed numerous buildings and infrastructures. There were 68,451 housing units destroyed, 327 praying sites, 265 schools, 78 office buildings, 362 store units, roads with 168 cracked points, 7 bridges, and many other structures. Because of the disaster's widespread impact, the housing sector has suffered the most loss and damage (Sutopo, 2018). Almost all of the buildings along the Palu Gulf coastline are level with the ground and heavily damaged (see fig. 18). The tsunami's advance, with a height ranging from 2.2 to 11.3 meters and reaching up to half a kilometer inland, destroyed the settlements in its path. Similarly, the settlement in Balaroa collapsed and was lifted. Thousands of houses were destroyed as a result of the liquefaction that buried settlements in Petobo and Jono Oge (BNPB, 2018). In addition to causing fatalities and leaving a deep trauma for the people of Palu, the disaster also had impacts in other aspects of urban life. One of them was the impact on people's homes. Based on field observations, the types of damage that occurred in Palu, Biromaru, and Donggala varied considerably, depending on the condition of the residence and location.

Variations in damage impacts were also affected by the type of disaster (see table 2). Earthquake effects followed by the liquefaction generally suffered very severe damage, even resulting in the loss of residential locations and farmland. In detail, the characteristic damage based on the type of natural disaster can be understood as follows:

Table 2: Natural disaster types and their respective levels of damage

Natural Disaster Type	Level of Damage	
Earthquake	 Severe damage marked by displacement of house and foundation, entire floor is cracked and wall is split; some homes collapsed Moderate to mild damage marked by homes being still intact and just having some cracks on the wall 	
Liquefaction	 house is lost, drowned, or totally damaged; houses shifted or carried away by ground movement (up to 6 km) building remained in the location but decreased into ground by 1 meter 	
Tsunami	 Fishing boats on the coast were severely damaged water entered the mainland, damage to bridges, roads, and buildings 	

Note. Table contains the various types of damage caused by the 2018 natural disaster in Palu. Own elaboration with data of the Palu Central Bureau of Statistics 2019.

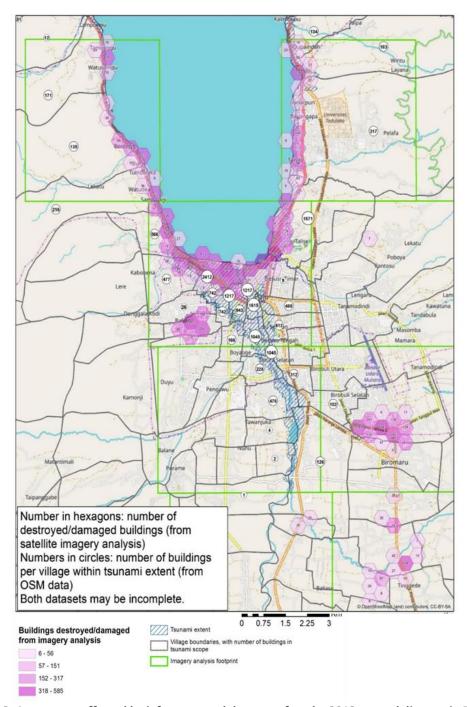


Figure 18: Areas most affected by infrastructural damage after the 2018 natural disaster in Palu

Note. This map summarizes the extent of building damage detected in areas where satellite imagery was captured and processed, as well as the buildings potentially affected by the tsunami. The totals in the grid hexagons include buildings that have been damaged, destroyed, or may have been damaged. These are mostly residential structures (99 %). The numbers in circles represent the number of buildings within the tsunami's path. Source: MapAction.org. 2018. From https://maps.mapaction.org/dataset/indonesia2018-ma042-v. CC-BY-SA 4.0.

Buildings that were still standing upright with minimal damage (such as cracked walls) and building structures that did not suffer fatal damage (such as shifting foundations or damaged columns of buildings) could still be used with the requirement of having to be renovated. The government categorized the damage into heavy, moderate, and mild damage. Using this categorization, the government planned to give compensation to the building owners in accordance with the respective damages and losses. However, at the time of research, compensations had not been made and were still in the logging phase. Aid for repairing damaged homes must be distributed gradually. Local governments require information on the number of victims in order to determine who qualifies for assistance. The Palu government is continuously gathering data on those who were impacted by the disaster in order to determine how much money will be distributed.

The impact of the disaster on livelihoods was both direct and indirect. Interviewee 17, a vegetable monger at Palu's Manonda market, was one of the disaster's victims interviewed by the researcher. When interviewed by the author, the mother of six children stated that her family ran out of food four days after the disaster. Her husband and children had to travel several kilometers to seek assistance from relatives in the city. Things were bad, but this 60-year-old woman stayed with her family instead of returning to her hometown in South Sulawesi to relocate with her extended family. She did not want to leave home for a refuge and chose to stay put with family and fellow traders. One rice monger in Palu's Manonda market mentioned that, after the disaster, fellow Bugis and Makassar traders who preferred to stay coordinated mutual aid. Those selling rice, for example, helped give some rice to the vegetable's mongers' families. Those selling vegetables set up public kitchens and cooked whatever was left over from their stock, while other food vendors shared what they had on hand. What happened to interviewee 18, a 30-year-old man, was distinctive. He had a motor workshop in a remote area of Palu and, a week after the disaster, he chose to continue his business in Gorontalo with his family. However, he chose to return to Palu two weeks later because he was concerned

about his workshop in the midst of the rampant looting of shops and supermarkets because he had expensive equipment that could be easily sold. As a result, he decided to return home and reopen his workshop a month later. During the intermittent aftershocks, the city was deserted by residents, and only volunteers on guard were seen.

The direct impacts were those experienced by fishermen and farmers (see fig 19). The fishermen that were affected by the tsunami lost their boats and fishing gear. Meanwhile, farmers that experienced liquefaction lost their farmland and some experienced indirect impacts due to damage to the Gumbasa irrigation channel. For non-agricultural livelihoods and fisheries, the disaster had an indirect impact: Firstly, subsistence related to the trade of agricultural and fishery products was indirectly impacted and, secondly, many services were unable to function due to the low electric power supply. Based on an interview with the regional secretary of Central Sulawesi on the 14th of April, 2019, it is known that victims of the disaster experienced economic difficulties because many were laid off as a result of their workplace being closed due to damage. Therefore, many could not meet their daily basic needs.

In an interview with the head of *Dinas Tanaman Pangan dan Hortikultura* (the Department of Food Crops & Horticulture) of Central Sulawesi, she said that Petobo and Jono Oge regions were two areas affected by liquefaction that had quite extensive agricultural areas. Sidera Village, located in Biromaru regency, was only affected by the earthquake and also had a large agricultural area (Susanto, 2020). Three farmlands in these villages acquired irrigation from the Gumbasa channel. For agricultural land in Petobo and Jono Oge, farmers suffered fatal damage due to soil movement while the agricultural land in Sidera village suffered the impact of crop damage due to the absence of irrigation after the natural disaster. The destruction to agricultural land and irrigation created an inability for farmers to work or cultivate their land. However, those working on agricultural land outside of the village were still able to work as farm laborers.

Two years after the earthquake and tsunami that hit Palu, Biromaru, and Donggala, the recovery of the agricultural sector is still being repaired after being



Figure 19: Earthquake and tsunami destruction for farmers and fishermen

Note. Photograph A. Former fishermen housing after boats were stranded boats and buildings collapsed after the earthquake and tsunami hit the area on September 28th, 2018. B. Salt pond site after the tsunami in Talise Beach of Talise Village in East Palu regency. Photograph taken by Mohamad Hamzah, 2018. Reprinted with permission.

devastated by the damage to the Gumbasa channel. There are about 8,000 hectares of rice fields that have been paralyzed due to the stalled irrigation of the Gumbasa channel.

Moreover, by the end of 2019, only 1,000 hectares had been watered after the repair of irrigation channels carried out by the Minister of Public Works and Public Housing (ISTIANTO, 2019). The damage to irrigation channels had an impact on rice production in Central Sulawesi because Biromaru regency is a Central Sulawesi rice supply area. The decline was seen in the reduction of Central Sulawesi rice planting areas. In 2020, only 232,927 hectares out of 286,720 hectares were used for planting. However, Palu's government tried to boost the process of planting in 2020 so that it could equal a planting area of 260,382 hectares (Puslitbang SDA, 2019). In addition to the impacts that affected the lives of farmers, the natural disaster in Palu also had an impact on the lives of fishermen. The impact of the natural disaster on fishermen ranged from damage to boats and fishing gear, the location of salt ponds, and locations of the fish processing industry. Boat damages occurred almost in all locations of fishing villages, such as in Kampung Lere, Talise Beach, Mamboro Beach, and in Wani Village. Damage to the salt ponds and fish processing industry was found along the coast of Mamboro Beach.

Most of the population was employed in cultivating fish. Meanwhile, the impact of the tsunami on salt farms was significant. Based on data released in the beginning of 2019 by the Department of Marine Affairs and Fisheries of Central Sulawesi, it is known that the number of salt farmers affected by the 2018 disaster reached 157 people. Furthermore, a salt pond area of 18.05 hectares was affected and 4 victims died as a result of the disaster. This was due to the fact that the mud carried by the tsunami was very smooth, thick, and dense. A few weeks after the natural disaster, the thicknesses of the mud from under the sea still covered up to 2 cm of almost all salt pond areas. This caused substantial losses to salt farmers because they could not harvest the salt. Since the land they used to produce salt was covered with mud, some of these farmers cleared their land with the help of water suction and shovels that they received from Oxfam organizations. Five months after being hit by the tsunami, Talise trade and salt production rose again, although it should be noted that the harvest of salt was not as much as before the disaster occurred.

In an interview, a 60-year-old female salt seller from Talise Village (in one of Palu's East regencies) said that she had been trading salt for more than 10 years. Two months after the disaster, she started selling salt again. She did not want to expect too much help from the government or volunteers to meet her daily needs. Currently, she has several plots of salt ponds that are processed by her son. Post-disaster salt production was not as optimal as before the disaster. In a week, up to three harvests can be done. When it came to income from post-disaster salt sales, she said that there had been a decline, but that she was still grateful for the income she earned. She acknowledged that the quality of the salt produced today is not as good as before. "There's still a lot of rubbish and building debris after the disaster, so it's still dirty and difficult to clean the area", she said. The price of salt did not change after the disaster, and the salt they produce sells for IDR. 150,000 per 50 kg. Stephen Rudgard, an FAO representative in Indonesia stated that Families in Central Sulawesi rely heavily on agriculture and fisheries (FAO, 2018). Therefore, for many of the inhabitants of Palu, this was their only source of food and income and it was lost post-disaster. Many have lost crops and the ability to cultivate or access food, agricultural tools, seeds, and fishing gear (FAO, 2018). Overall, most of the livelihoods in Central Sulawesi gradually recovered within six months after the natural disaster. Nevertheless, the economic recovery process has been slow in restoring income levels and lowering the high unemployment rate, especially for refugees. Household occupations in Donggala, Parigi, and Biromaru regency before the disaster were concentrated in agriculture (32 %), fisheries (42 %), small businesses (18 %), and government employees & services (8 %) (BPS, 2021). Agriculture is the most common employment sector in these regencies while, in Palu, service employees and government employees are more common (REACH, 2019). In early February of 2019, the main types of employment reported by households were almost identical, thus indicating that most of the livelihoods in the area that were affected by the disaster had been recovered. However, since the disaster occurred, the number of households that reported that they did not have a job and were unemployed increased from 4 % to 10 % (BPS, 2021). Before

the disaster, there were very few households that had no major work. Households headed by women were more likely to become unemployed than households headed by men. Since the disaster, the number of households reporting that they do not have a primary job and are unemployed has more than doubled in almost all of Palu, Biromaru, and Donggala.

The effect of unemployment has also been seen in the inability to afford household basic needs. The World Food Programme (2018) organization reported that victims had lost an average income of 10 % since the disaster. Although most businesses have reopened and prices and stocks of goods have returned to pre-crisis levels, 61 % of traders report that they are experiencing an overall decline in sales (UN General Assembly, 2018). Many families have at least one member who can work, but they cannot obtain employment (UN GENERAL ASSEMBLY, 2018). The main reason reported was that their business was destroyed, the land was destroyed, or that they were ineligible for the jobs available. Destroyed businesses are the main reason that unemployment rates rose in Palu (REACH, 2019).

Economic growth indicators in Palu are determined by the GDP), the inhabitants' overall income, the level of employment and unemployment, and the population's welfare as measured by the distribution of goods and services. Palu's economic growth rate decreased from 2012 to 2019, including after the disaster (see fig. 20).

Palu's government stated that the decrease in economic



Figure 20: Palu's Economic Growth Rate from 2012 - 2019

Note. Own elaboration with data of the Palu Central Bureau of Statistics, *indikator ekonomi kota Palu*, 2019.

growth was caused by reduced growth in the mining and quarrying sectors as well as the trade sector. Furthermore, the disaster caused Pantoloan Port to be damaged. This had an impact on the stalled flow of goods (both in and out) of Palu (BPS, 2019). Based on interviews conducted in May, 2019, with a representative of a non-governmental organization, data was obtained that revealed the conditions of the victims without temporary housing, as well as where they live today and what economic activity victims were pursuing. For instance, refugees who were in relocation centers were oftentimes residents of Jono Oge Village, which had been affected by liquefaction. Their economic activity before the disaster was mostly centered in farms and farm labor. Those who had the skills to work in carpentry and similar jobs had uncertain livelihoods. They could only find work if someone built a house and were paid only about IDR 1 million to 1.5 million (equivalent to approx. US\$ 75-100), well below Palu's average minimum wage of IDR 2,620,989 (equivalent to approx. US\$ 185) (BPS, 2019). One year after the disaster in Palu, the surrounding areas had made little progress. This was illustrated by the many victims that had until then been displaced in refugee camps as well as in temporary shelters. Many of the victims had been living in temporary housing from the government, but thousands still remained in refugee tents (see fig. 21). One informant said that they felt unnoticed by the government. This was conveyed when they stated the following:

Pemerintah terkesan membiarkan, tidak perduli kita hidup dengan nyaman atau tidak di pengungsian ini. Makanan tidak ada, penghasilan juga tidak ada. Tapi tidak jelas kapan kami dapat bantuan dan bisa pindah ke hunian sementara yang dijanjikan. Karna sampai sekarang belum ada kejelasan kami terima kapan atau apa kami juga bias dapat itu rumah atau tidak (Interviewee 19, May 11th 2019).

They said that they were still displaced because there were no permanent jobs. Meanwhile, basic services were no longer obtained after emergency responses (e.g. food, clean water, and health & education services). They also said that the government had relinquished its responsibility to handle and help the victims recover from the disaster in Palu. Victims were left to deal with the problem with less support. Many survivors wished for an increased presence of the state in order to provide the certainty of life, including

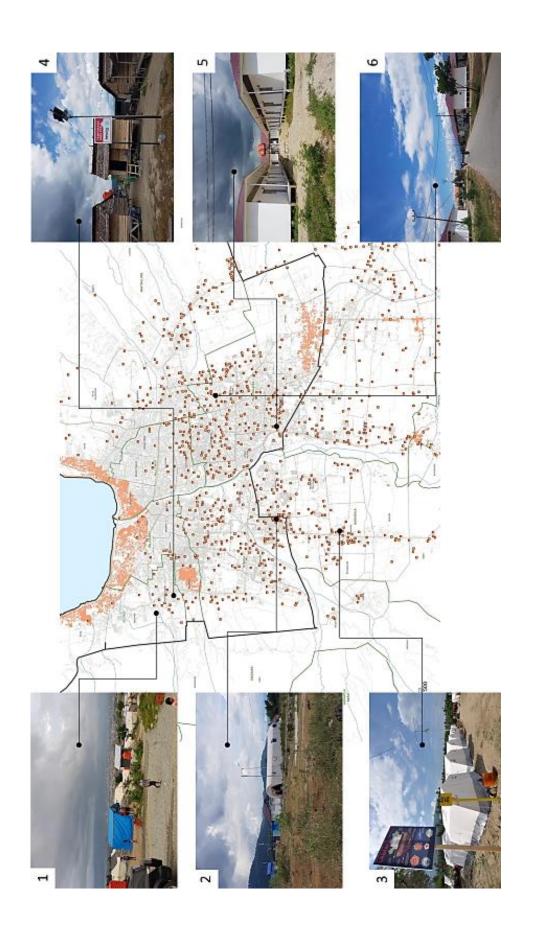


Figure 21: Distribution map of evacuation points and pictures of refugee camps and temporary shelters for disaster victims of Palu

housing. Photograph 4 shows an emergency house that was built by volunteers just 50 m away from a temporary residence that was built by the Note. Photographs 1,2, and 3 depict the refugee camps of UNHCR and Turkey, while photographs 5 and 6 show temporary residences built by Palu's local government. Many of the disaster victims that have been displaced are living in refugee camps to this day and only a few have been placed in temporary fromhttps://www.impactrepository.org/document/reach/41d588c4/reach idn map sulawesi idpspalu 06oct2018 a3.pdf. Photographs by the author. Retrieved www.reach-initiative.org. adapted

dignified housing, fulfillment of the basic rights of victims, and providing employment for those who lost their jobs due to the disaster (REACH, 2019). The emergency housing was inhabited by refugees while the temporary shelters around this area were empty. The following statement was made by a survivor who explained the reasons why many people still lived in refugee camps and not in temporary shelters built by the government. Interviewee 20, a 45-year-old male refugee, said that:

Saya masih tinggal ditenda karna rumahku hancur, untuk pindah ke Huntara harus bisa tunjukan sertifikat rumah yang dulu saya tinggali, tapi kan semua sudah hilang pas gempa dan likuifaksi. Jadi sampai sekarang masih menunggu kebijakan dari pemerintah. Kami tidak bisa banyak berbuat sudah kehendak Tuhan begini (Interviewee 20, May 11th 2019). He explained that he could not live in temporary housing because he did not have the required land ownership document of his previous house. All important documents, including the home certificates, were lost when the liquefaction disaster occurred. He mentioned that they could not do anything other than wait, that the disaster was beyond their control, and that it was God's will.

Apart from the many victims that have not received shelter, the government's data on victims is invalid. Many families are recorded in the local regencies' offices but are not recorded in the provincial government data base, resulting in only a proportion of the victims receiving temporary housing while thousands of people are forced to live in refugee tents.

There is a lot of misinformation in all institutions since they are not integrated in disaster management. There is another issue in the handling of the 2018 natural disaster: the government of Palu was less concerned with victim's rights, and preferred focusing on administrative formalities. Thus, there were many incidents of disaster victim expulsion from temporary housing because the residents were not from the area where the temporary housing was built. Although some of the victims were residents who owned houses, many were also people who rented homes such as fishermen on the coast of Palu. Because they lived in uninhabitable dwellings before, once the disaster occurred, if their homes were located in a disaster-prone zone, they ended up having to be

abandoned without the possibility of receiving government assistance for reconstruction. The residents whose homes were affected by the natural disaster were relocated to the Tondo area, which is approximately 7 km from where they worked. This caused residents to be reluctant to move into temporary housing provided by the government.

The constructions in relocation areas are under threat to be abandoned because permanent and temporary dwellings (either built or to be built) will not be inhabited by residents (Taufan, 2019). Palu's spatial revision study that is currently being conducted by the government is not related to a disaster perspective, even though the Meteorological, Climatology & Geophysical Agency has issued disaster-prone zone data. In a final report of the spatial planning for strategic areas in Palu and its surrounding areas, the government received criticism from the non-governmental organization WALHI (SUSANTO, 2020). They questioned the non-adjustment of mining areas to disaster-prone zones, since almost all mining areas in Palu are included in the disaster-prone zones of other publications. This contradicts the fact that, on the map of disaster-prone zones that was created by the central government, almost all mining areas in Palu and Donggala were included in the red zone (LAPABIRA, 2019). There are differences in zoning and levels of disaster insecurity between the map of the Meteorology, Climatology & Geophysics Agency and the master plan document of post-disaster development of Central Sulawesi (Susilo, 2020). The disaster in Palu resulted in more than 70,000 homes being reportedly damaged, forcing thousands of residents to evacuate to temporary housing before eventually returning home or gaining new housing (HANNAH, 2018). In March of 2019, there was a reported decrease in the percentage of households living in self-owned buildings by 6.34 % of Palu resident (see fig. 22).

This was one of the impacts of the disaster that occurred in 2018. Many victims preferred to rent housing, stay in a relative's home, or stay in temporary housing until they were certain about the construction of permanent housing from the government. Even though nearly four years have passed since the incident, the refugees have not received any certainty as to when they will receive permanent housing. The majority of

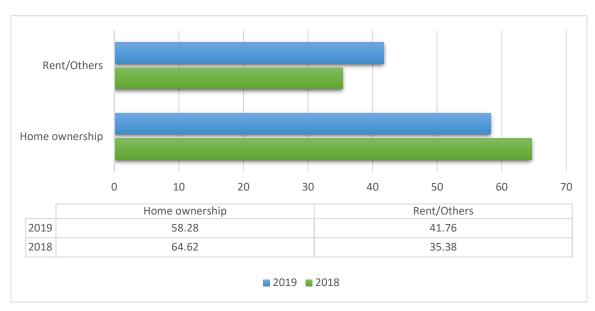


Figure 22: Palu Home Ownership by percentage in 2018 and 2019

Note. Following the disaster, the Palu community reduced its ownership of private homes. This is due to a natural disaster that destroyed their home. As a result, some people choose to stay at relatives' homes or rent other people's homes until they are able to repair or buy new homes.

households, regardless of refugee arrangements, want to repair or rebuild their old homes and resume their former lives. However, households living in liquefaction and tsunami affected areas cannot return and rebuild on their land. Many have been moved to government-built temporary shelters, but many others are still unable to return home and may need additional support to move to a safer area (MINASNY, 2012).

After the disaster, the COVID-19 pandemic followed. As stated by some informants, this made finding employment considerably difficult for the residents of Palu; many of the residents have contributed to the economy in spite of being forced to switch their professions. The devastating losses due to the natural disaster of 2018 and the COVID-19 pandemic has not clouded most inhabitants' optimism. Interviewee 20, a 47-year-old man, admits that he has become a snack salesman after struggling for more than a year in a refugee camp to get a job. He used to be a fisherman who relied solely on boats and fishing equipment. Because everything was lost during the tsunami and he received no help, he ended up being unemployed. Although he was only selling snacks, he was able to fulfill the needs of his family every day. Interviewee 20 claimed to have been able to

return to work despite having to start a new job as a farmer. Before the natural disaster, he was a motorcycle taxi driver who had regular customers. From his previous earnings, he was able to support his wife and two children who were in elementary school. However, his motorcycle, which represented his prime investment, was swallowed up by the earth during liquefaction in Balaroa Village, Ulujadi sub-regency. Since the natural disaster and pandemic, it was very difficult for him to find a job. Thus, he decided to take advantage of his relative's land in Bayaoge Village. There, he planted curly red chili peppers with a capital of IDR 500,000. The profit from the sale of chili peppers is used to meet his daily needs and to buy seeds to be planted next year.

Another story is from interviewee 21 who rebuilt his old fabric business that was damaged by the earthquake that occurred in 2018. He stated that he was now facing the sluggishness of the market due to Covid-19. The determination and new spirit that he instilled into rebuilding his business so that it could function normally after the disaster was again affected as his profits showed a significant decrease after COVID-19 hit Palu. This forced the local weaving entrepreneur to look for new ways to keep his 10-year-old business afloat. He claimed to be confused by the various information circulating around COVID-19 and that the pandemic's end could not be predicted.

5. Discussion

5.1 Centralization Era

From 1945 to 1998, Indonesia was characterized by a powerful, centralized state apparatus and "soft authoritarianism" led by Sukarno and Suharto. Sukarno ruled Indonesia from 1945 to 1967, and Suharto followed from 1968 to 1998, establishing a centralized government system. Each of the three stages of Palu's history (the era of centralization, the era of decentralization, and the post-disaster phase) have had significant impacts on Palu's development as a whole. Analyzing their significance is key to understanding medium-sized cities in the Global South's context.

As previously mentioned, Palu's initial development began with the implementation of a population distribution agenda that was known as the transmigration program (1969-1998) during the era of centralization. The primary goal of this program was to reduce population inequality in Java and in areas other than Java, such as Sulawesi and Kalimantan. Another goal of this program was to limit the cultural significance of ethnic minority cultures. During the Suharto era, the government claimed that through the transmigration program, all ethnic groups would be integrated into one (FEARNSIDE, 1997).

Following the implementation of the transmigration program, the number of migrations to Palu increased significantly. The transmigrants then occupied land that was provided by the government. However, the majority of the transmigrants resided and worked on land outside of Palu, specifically in the Biromaru and Kaleke Village areas. This was in line with the aim of transmigration, as defined by Law No. 3/1972, which was to increase regional development, balance population distribution, and promote equitable development throughout Indonesia (Rustiadi, 2011). These new settlements or lands for transmigrants eventually contributed to the development and acceleration of the growth of Palu's periphery, and some of them became areas of expansion into new regencies, such as Biromaru village (which is now independent as Biromaru regency).

In terms of expanding access to production factors, transmigration has constructed physical transportation facilities such as roads, bridges, culverts, and drainage channels, which have transformed the isolation of previously undeveloped areas. The progress of the areas occupied by transmigrants cannot be separated from the support of the Suharto government, which facilitated transmigrant settlement. However, this created a negative stigma for local communities. One of the factors contributing to the emergence of this negative stigma was the government's priority for ethnic migrants (transmigrants) in terms of empowering and fostering the communities in the transmigration settlement units while paying less attention to local residents of Palu. As a result of this disparity, the development of the transmigration areas has been relatively

fast compared to surrounding villages of Palu, causing jealousy and potential conflict triggers. Furthermore, the central government implemented the transmigration community empowerment and development system, which resulted in Palu's local culture barely developing while migrant culture dominated. Although there was social jealousy between the indigenous people of Palu and migrants, during the era of centralization under Suharto's leadership, the potential for conflict could be reduced due to restrictions on public information as well as restrictions on the movements of certain groups that were considered separatist and endangering the unity of the republic of Indonesia. These groups were directly monitored by Indonesia's military forces.

Aside from the issues of development and infrastructure disparities between the island of Java and the islands outside of Java, the centralization era was also marked by restrictions on religious life. Religion infiltrated not only the private but also the public spheres of Indonesia. State policies allowed for religious freedom while also imposing strict controls in the name of stability. On the one hand, policies regarding religion protected minority groups from discrimination but, on the other hand, they would also perpetuate discrimination against minority groups. Although the Suharto government issued numerous religious regulations in Indonesia, it did not necessarily solve religious issues because the increasing presence of religion in the public sphere complicated religious management issues.

One of these policies was the Joint Ministerial Decree issued during the Suharto era that regulated the establishment of houses of worship. After its implementation in 1975, this decree hampered the establishment of a number of places of worship for minority residents, such as Christians, Catholics, and Buddhists, while also justifying acts of vandalism and intolerance (FAISAL, 2012). Although there were restrictions on the establishment of places of worship as a result of policies issued by the Suharto government, some areas in Palu were dominated by the Christian population who were migrants from Poso and North Sulawesi Provinces (such as Manado), which are known for

their majority Christian populations. Palu had a large number of churches and Christian settlements.

The Al-Khaerat Islamic boarding school also played an important role here. Before independence, the Islamic boarding school founded by Sis Al-Jufri had a strong influence on Palu's Islamic discourse. Sis Al-Jufri is well-known for his moderate Islamic teachings based on the Prophet Muhammad's guidance. He spread and taught Islam as a religion that values peace and coexists with people of other faiths. As a result, Palu's predominantly Muslim population has adopted a moderate Islamic mindset and this had an impact on interfaith relations. In addition to the role of community leaders like Sis Al-Jufri, who taught moderate Islam, another explanation for the religious harmony in Palu is that the Kaili tribe who live in Kulawi Village is Christian and is known for its openness. In addition to the positive relationship between Islam and Christianity, Hinduism is well accepted within the Palu community. Since the 1980s, Hinduism arrived in Palu in a peaceful manner. Hindus, the majority of whom were transmigrants, were well received by the Muslims in their surroundings. The management of harmony in Palu had been primarily at the level of religious leaders, rather than at the community level. Religious leaders in Palu are used to interfaith dialogues. This is, of course, is crucial. After all, religious leaders play an important role in making decisions that have a broad impact and are respected by their followers. Interfaith communication at the individual level, on the other hand, is also essential.

As previously mentioned, apart from dominating and regulating religious life, the government's influence was also visible during Suharto's presidency in the freedom given to certain ethnic groups regarding their activities in Indonesia. As previously noted, the Chinese were the most discriminated ethnic group at the time. All Chinese religious practices, beliefs, and customs were restricted. This was due to the suspicion that people of Chinese descent still had strong ties to their ancestral lands. Hence, their sense of nationalism toward the state of Indonesia was questioned. As a result, a policy that was discriminatory against people of Chinese descent was enacted in 1980 (HADIMAJA, 1989).

At the time, Suharto prioritized economic growth and directed the Chinese to the trade and retail sector while his government closed other fields to the Chinese (SURYADINATA, 2002). As a result, the ethnic Chinese had no choice but to start their own businesses because there was no way for them to become government employees or work in fields unrelated to trading at the time. This restriction became a motivator for ethnic Chinese to advance their businesses through hard work (FITRI, 2021). Suharto also closed other sectors to China, but in order to grow Indonesia's economy, Suharto provided various facilities that guaranteed profits and special treatment for foreign investors. This policy allowed Chinese entrepreneurs to expand their businesses and play an important role in the Indonesian economy. This is why the Chinese became the main actors in Indonesia's investment, trade, property, and banking sector.

Ethnic Chinese were given many opportunities because they were thought to have access to foreign countries in order to attract foreign investors. Indeed, Suharto's strategy was quite successful in attracting foreign investors at the time (YERY, 2000). This inadvertently strengthened the economic position of the ethnic Chinese and set the population of Chinese descent apart from the indigenous population, the majority of whom were economically disadvantaged. Under Suharto's leadership, the economy developed rapidly while social development improved, though development was not evenly distributed across the country. Poverty reduction, in particular, was a relatively successful achievement of the Suharto regime. However, government policies during the centralization era had potentially disastrous consequences, culminating in the Asian Financial Crisis in the late 1990s. Political and economic decisions were essentially biased toward certain people and benefited only a small group of Suharto's elite supporters. Suharto's government, which was based on a system of nepotism and corruption, resulted in a small group of Suharto's elite supporters benefiting greatly from the country's wealth. This group included Suharto's children, as well as business partners of Chinese descent (which encouraged ethnic sentiment among Indonesians). Government policy promises of openness and transparency had never been kept. Furthermore,

corruption impaired the economy's ability to function properly. The social inequity and injustice felt by various levels of society as a result of these policies sparked the massive riots that occurred at the end of Suharto's presidency. The anti-Chinese sentiment that had persisted in Indonesia for decades has reached its culmination. Some actors with political agendas blamed the crisis on people of Chinese descent. These actors organized masses of indigenous people to attack and loot them. Therefore, one of the causes of the May 1998 riots was racial prejudice against ethnic Chinese people.

Since Palu is one of the places where ethnic Chinese people migrated, these centralization policies had a significant effect on Palu's economic development. The ethnic Chinese's behavior and trade sector in Palu may not be dissimilar to other areas, where the majority of them relied on trading as their primary source of income and having a strong network of fellow ethnic Chinese. Ethnic Chinese people tend to have large families and feel a great responsibility toward helping their family or fellow ethnic Chinese, oftentimes manifesting in social obligation. Wherever ethnic Chinese migrants are, they tend to look out for and assist one another. They can reap the benefits based on their ethnic similarities, such as increasing "contact points" for businesses or work information, exchanging news or merchandise, and providing or receiving psychological and moral support (TJOE, 2008). The relatively strong network owned by ethnic Chinese traders is also supported by their access to larger capital compared to local traders in Palu, making it difficult for the latter to compete with ethnic Chinese traders (KARMELA, 2017). Because of these factors, as well as the Suharto government's economic policies, the Chinese community became one of the most economically powerful in terms of trade during the centralization era.

One final aspect of the centralization era that had a significant impact on Palu's development was the government policies aimed at providing broad support for large corporations and foreign investors, such as the monopolization and privatization of specific sectors, as well as capital assistance from banks, which were largely controlled by Suharto's cronies at the time. While the monetary crisis of 1998 left many companies in

debt, Palu was less impacted because there were relatively few large companies in Palu during the Suharto era. The majority of business actors in Palu were small and medium-sized enterprises: the majority of small businesses were owned by local ethnicities and ethnic immigrants (such as the Javanese, Bugis, and Padang), while the majority of medium-sized businesses were owned by Bugis and Chinese ethnicities. When the economic crisis hit in 1998, only the small and medium sized businesses were able to survive, while the larger businesses were uprooted. Large corporations, particularly those in the construction, manufacturing, and banking sectors, were considered to have been significantly affected.

The rupiah exchange rate fell by 197 % against the US dollar, causing bank failures. Weak regulations and a lack of government oversight at the time led to a number of banks that were controlled by conglomerates taking public funds abroad and reinvesting them in their group's businesses. Thus, when the rupiah exchange rate fell, the banks' foreign currency debt increased and, at the same time, capital borrowers that were affected by the crisis were having difficulty meeting their obligations to banks. As a result, more than 50 private banks, the majority of which were controlled by ethnic Chinese, were closed. Due to the crisis, the position of economic actors had shifted from big corporations to small and medium enterprises, where small and medium-sized businesses became government instruments, essentially rescuing the economy from the 1998 Asian Financial Crisis recession (Komara, 2020). The reasons that small and medium enterprises in Palu survived and grew during the crisis were that most small and medium enterprises produced consumer goods and services with low elasticity of demand for income. Aside from that, the majority of them used their own capital rather than borrowing from a bank because it was difficult for them to obtain loans from a bank at the time. The implication is that, during the crisis, the downturn in the banking sector and rising interest rates had little effect on these small and medium-sized businesses. As a consequence of the prolonged economic crisis, many workers were laid off in the formal sector (PARTOMO, 2004). As a result of the unemployed entering the informal sector and engaging in smallscale business activities, the number of small and medium-sized enterprises in Palu increased.

5.2 Decentralization Era

Indonesia's government began to establish a decentralized system in 1999. There are several reasons why Indonesia implemented a decentralized system. The reasons were social, political, and economic in nature. One example was international and regional dissatisfaction with the previous authoritarian regime, which eventually forced the central government to decentralize and give more power to local governments. Decentralization was also seen as an important component of developing regional competitiveness in the context of economic recovery. One goal of decentralization in Indonesia was to empower local economies by giving local governments broad authority to build and develop their respective region's potential. Furthermore, this objective cannot be achieved unless local governments clearly understand their potential competitiveness factors. Local governments can enact favorable laws and regulations for strengthening an attractive business climate in their territories if they have adequate and precise knowledge of the potential factors (KPPOD, 2003).

5.2.1 Social and Political Tensions in Palu and neighboring Areas

Decentralization was used as a way to reduce social and political tensions and to secure local cultural and political autonomy in a country with a large ethnic diversity, which can cause conflict and separatist movements (BARDHAN, 2002). However, decentralization indirectly affects conflict dynamics by stimulating population demographic changes through sub-national administrative unit splitting, allowing for local autonomy and participation in decision-making through direct elections, and incentivizing local elites in both new and existing areas to compete for power and resources by mobilizing sensitive identities. This isn't to say that the demographic, structural, and institutional changes induced by laws and demanded by the public will necessarily lead to violent conflict, rather, they will interact with local tensions and may exacerbate them. This can have both positive and negative consequences, as it can help to relieve old

tensions and grievances while also provoking new ones. When large groups of people identify with diverging ethnicities and there are strong perceptions of unequal access to resources and opportunities between groups, decentralization tends to lead to violent conflicts. This was demonstrated by the conflict in Poso and other cases of conflict in Palu.

Suharto's policy of restricting information and public movement through the use of military force resulted in conflicts between ethnic and religious groups in various regions during the centralization period. However, this did not occur during the decentralization period, because the transition from the centralized to decentralized era (known as the reform era) provided freedom of press in conveying information and freedom of association following the overthrow of the Suharto government. Furthermore, the military's political, social, and economic role gradually dwindled and it was no longer the dominant force that it was during the Suharto regime. As a result of the military's diminished role as of President Habibie's government, civilian and military power became more balanced in determining political policy. As mentioned before, decentralization has had some indirect effects on regional conflict dynamics and understanding these processes is important for managing diversity and structural change in other decentralized countries and regions.

Decentralization can result in a variety of changes, including the formation of new administrative areas, control over natural resources, elite power struggles and alliance formation, and fights for representation of ethno-religious groups in local executive and legislative bodies that affect many aspects of people's lives. There were no laws that discriminated against religious adherents in this era as there were during the centralization period. Particularly in Palu, religious adherents live peacefully. The laws that prohibited the construction of places of worship during the centralization era were changed during the first years of decentralization. The response of Palu's communities to the Poso conflict demonstrated that religious life in Palu was quite harmonious and safe. When the major religious conflict erupted in Poso (located 205 km South from Palu), the majority of its residents fled to Palu for safety. Palu's population, which is predominantly

Muslim, welcomed the residents of Poso, who were known to be predominantly Christian. This was due to moderate Islamic influences. Hence, the moderate Islamic perspectives in Palu helped in maintaining inter-religious harmony. If the majority of the Muslim community in Palu had been an intolerant group, the Poso conflict would have had a significant influence on the pattern of inter-religious relations in Palu, particularly between Muslims and Christians. Thus, the conflict had no direct impact on Palu's religious harmony. The religious harmony in Palu was also maintained when terrorist groups attempted to incite a stormy atmosphere in Palu by shooting a pastor during a congregation in a church in 2003 and when bombs were detonated at another church and Maesa Market in 2011. These actions did not result in riots between Muslims and Christians in Palu, unlike the events that occurred in Poso. The assassination of a religious leader is undoubtedly a traumatic event for Christians. Nevertheless, the Christians of Palu were well aware that this incident was a form of terror designed to provoke them, hence they did not let themselves become inflamed (Zulfiah, 2013).

In comparison to the previous era, a time when ethnic Chinese were subjected to severe restrictions on their identity and activities, during decentralization, ethnic Chinese began to display their existence and culture more openly. For instance, the implementation of the Lunar New Year, which was fully supported by President Abdurrahman Wahid in 2001, exemplified an increased cultural acceptance of ethnic Chinese in Indonesia. During the centralization era, ethnic Chinese were rarely involved in politics, but that did not mean they were not involved at all. Some enlisted in political parties but did not occupy influential positions or become well-known political figures (Suryadinata, 2013). However, during the era of decentralization, ethnic Chinese began to form associations in order to strengthen the existing consolidation of Chinese interest groups. Some have even become prominent candidates in regional head elections and have contributed to Indonesian politics. They now also have the freedom to choose to assimilate with the indigenous parties and groups of their preference. This is a direct result of the repeal of policies imposed during the centralization era that limited the

approved behavior and political attitudes of certain ethnic groups. The strengthening of ethnic Chinese politics during decentralization was also an indication of an increased awareness among them to change their political situation and position themselves as policymakers rather than simply acting as political objects.

The Chinese economy and business dominance in Indonesia during the centralization era had a significant effect on the lives of the Chinese during decentralization. As the reformation period began, the ethnic Chinese's social network with local businessmen or stakeholders markes Indonesia's social fabric until this day. It is not surprising that when people hear the term ethnic Chinese in Indonesia, the first thing that comes to mind is their economic strength; that is commonly understood as the identity of the ethnic Chinese. While the relationship that was built between the government and ethnic Chinese businessmen was hidden during the centralization era, during decentralization, it became visible in various fields, particularly in the field of politics (Suryadinata, 2013). Thus, the relationship between Chinese entrepreneurs and stakeholders was strengthened during the decentralization era. This relationship was no longer a taboo or unusual thing. Instead, it became an "declassified secret" since, during decentralization, the government no longer restricted the press and freedom of expression, thereby allowing people to have more open, critical, and easily obtainable information.

The power of social connections cannot be underestimated when it comes to strengthening one's identity. Field (2014) states that the main focus of the concept of social capital is how social networks become a very valuable asset. Social networks provide the foundation for social cohesion because they provide space and encouragement for people to be linked to each other in order to provide mutual benefit. The networks of the ethnic Chinese, particularly Chinese businessmen in many areas of Indonesia, is a powerful portrait of social capital. Coordination between regions or between the central government and regions is relatively easy for ethnic Chinese businessmen because they have built a network of trust among themselves. As a result,

during the era of decentralization, they increasingly became a dynamic component of the Indonesian economy and expanded into the various fields opened up by the new economic policy. However, the ethnic Chinese's great success during this time period resulted in anti-Chinese sentiments that resurfaced among many Indonesian natives.

Although anti-Chinese sentiments increased, ethnic Chinese people in Palu live in harmony with the locals. They openly celebrate Chinese New Year together, build houses of worship, and even schools. Despite this, no Chinese figure has ever succeeded in becoming a regional leader due to the "Putra Daerah" (original people) issue, which implies that indigenous ethnicities or indigenous peoples have the most right to become leaders in their region. This topic is still very important for the majority of Palu's residents. Identity politics frequently use the issue of "Putra Daerah" as propaganda. As a result, regional leaders in Palu and members of the legislature have been dominated by "Putra Daerah" until now. This is in contrast to what occurred in the Papuan city of Sorong. Kocu's (2007) research, which used Sorong as a case study, describes the rational choice theory, in which voters in Sorong were not influenced by ethnicity or individual loyalty. They preferred candidates who could bring people welfare, thus their opposition to ethnic equality was unproven.

Politics of the "Putra Daerah" did not exist in the period of centralization, during which several regional and institution heads in Palu and throughout Central Sulawesi Province were primarily from other ethnicities (such as Javanese and Sumatera). This occurred because the heads were directly appointed by the central government at the time, hence the residents of Palu played a smaller political role. Eventually, the people gained the power to play an active role in determining their respective regional leaders during the decentralization era when direct regional head elections were implemented. Local elections were successfully held for the first time in 191 regencies in June of 2005. However, they were marred by the issue of "Putra Daerah", which was utilized to disqualify certain candidates for regional leadership due to their ancestry. Furthermore, greater political decentralization may empower inadequate local politicians and interest

groups by ensuring that election outcomes are not solely determined by their performance (IQBAL, 2015). Furthermore, local elections encouraged the rise of local elites and increased corruption at the local level. Many regional heads that won the local elections were entangled in the region's corruption issues. Local elections also led to dynastic politics in several Indonesian regions. Therefore, it can be concluded that accountability, which was the purpose of decentralization, was not truly achieved.

Another example of the "Putra Daerah" phenomenon in Palu was the promotion of regional employees or the election of legislators. According to one of the informants, ethnicity was a fundamental consideration in the selection of Palu's employment promotion system. When people had certain ethnic backgrounds or came from specific regions, they often found it difficult to achieve strategic positions of leadership in the staffing structure. Frequently, professionals with multiple achievements were unable to occupy certain positions due to their religion or race. This phenomenon occurred during the era of decentralization as a result of the implementation of the regional autonomy system. Since the beginning of regional autonomy in 2001, signs of unhealthy ethnic "privilege" have emerged. Privilege persists when one group has some kind of advantage that another group does not have, solely because of group identity and not because of anything a group or person has done or has failed to do (Johnson, 2006). For those who frequently benefit from privilege, the challenge is to make them acknowledge its existence. It is critical to recognize that privilege is a phenomenon that favors some while limiting others' knowledge. This condition had not been considered previously, thus it was not anticipated. This phenomenon serves as a warning that regional autonomy must be carefully planned and considered. It should be noted that, if this phenomenon becomes more prevalent, it will undoubtedly exacerbate social conflicts involving loyalty to common historical roots, identities, and cultural sentiments rooted in race, ethnicity, and even religion. As mentioned by Bethesda (2016), understanding and discussing privilege is a crucial part of addressing individual and systemic inequities in our society. Urban planners and policy makers must be conscious of and open to various perspectives and how they may or may not contribute to prejudices that unintentionally lead to stigma, inequity, isolation, poverty, and violence.

The majority of ethnic Chinese in Palu were primarily interested in business fields, such as trading and investment (MAHSUN, 2017). Similar to other cities in Indonesia, ethnic Chinese were the main actors who dominated large corporations in Palu, such as real estate, warehousing, and retail. Other ethnic migrants, on the other hand, dominated the small and medium-sized business sectors. In terms of trade, Palu's ethnic Chinese prefer to trade goods in wholesale. In contrast, other ethnic groups, such as Bugis, choose to trade goods in retail. This is because ethnic Chinese have more financial capital and larger social networks than other ethnic groups and local residents. Hence, they can buy goods in large quantities so that they are able to open businesses by selling goods wholesale. Many businessmen from local or other ethnic groups tend to buy goods in Chinese shops and resell them. When it comes to trading locations, ethnic Chinese typically trade from their homes or open their own shops. This is primarily due to convenience and security. The Chinese tend to choose different locations from other ethnic traders in order to maintain harmony.

The conflicts that occurred between traders from the Bugis ethnicity and traders from the original ethnicity of Palu (the Kaili) never occurred with the Chinese, even though the Chinese play a large role in Palu's economy and businesses. This is related to the fact that ethnic Chinese tend to open businesses in their communities or avoid business locations where the majority of the local ethnic groups trade. However, the preferred business locations of ethnic Chinese created the stigma that they were exclusive and that they closed themselves off from socializing with locals. However, the people of Palu recognized ethnic Chinese as attractive business partners because they are hardworking, trustworthy, and professional. As a result, doing business with them is considered as efficient and effective. As can be seen from the ethnic distribution map in the previous chapter, ethnic Chinese dominate the main business regencies, which are marked by retail buildings they built themselves. The Bugis and Kaili ethnic groups, on the other

hand, dominate the traditional market area and the coastal area. Ethnic Chinese also predominate in high-priced city centers, whereas other ethnic groups, such as Kaili or Javanese, prefer to live in the suburbs with lower-priced land. This is undoubtedly related to the ethnic Chinese's economic capacity, as they are more able to purchase land in the city center, which is strategically used as a place of business as well as for housing.

5.2.2 Regional Autonomy in Palu

In terms of decentralization and regional autonomy, the general literature contends that the presence of good vertical and horizontal relationships in local governance is one of many important strategies for making decentralization a success (SATTERTHWAITE, 2001). Vertical relationships concern interactions with local governments and the central government, whereas horizontal relationships concern interactions between localities and among actors within the same regions (LARSON, 2008). Regional governments gained the authority to managed their respective regional wealth as a result of the implementation of regional autonomy in 1999. According to the findings of interviews, duties and authorities of Palu's local government have become more challenging in this era. Two major challenges arose as a result of decentralization policies and regional autonomy. First, under Indonesia's new decentralization policy, the principle of decentralization has a significant impact on intergovernmental relations in terms of formal structure and regulatory systems. In terms of full authority to manage local issues and relations, municipalities and regencies are highly autonomous. Second, municipalities and regencies in Indonesia, including Palu, remain highly dependent on the central government's funding, since the central government provides the majority of their income. In order for authorities to solve local issues independently, municipalities must have the authority and responsibility to develop and implement programs and solutions addressing regional issues. In an autonomy system, local government requires a better grasp and understanding of the numerous new regulations that have been implemented, so that local government actors can carry out and adhere to these regulations, lowering their reliance on the central government in order to improve urban development.

The public-private-community partnership approach is a synergistic operational model for achieving sustainable development in which three parties collaborate to develop mutually beneficial business units and services that benefit the entire community (Kouwenhoven, 1993). Within this framework, the private sector gains long-term benefits in the balanced inclusivity between the chain of producers and consumers. The public sector benefits by gaining additional resources and values of investments as well as assuredness of participation. Lastly, communities benefit by acquiring skills, knowledge, new technologies, and the availability of adequate infrastructure. Policies that encourage infrastructural growth are needed to achieve quality and long-term economic growth.

Adequate infrastructure can boost economic growth. Palu's government is expected to be able to issue regulations that will encourage the private sector to collaborate in the availability and improvement of infrastructure in Palu, resulting in increased economic growth that will benefit all of Palu's residents because high economic growth must be balanced with equally distributed well-being. In an interview with the regional secretary of Central Sulawesi, he stated that the government of Palu used their authority to issue policies that were aimed at attracting investments in order to reduce reliance on central government funding through regional economic development. Palu's investment growth has been increasing since the implementation of regional autonomy. Nonetheless, the private sector's involvement in infrastructure procurement in Palu, as well as private collaboration with the community, has been relatively low.

The majority of private roles are more focused on non-physical community investments and corporate social responsibility (such as being a sponsor of an art or sports event). Private-sector infrastructure, such as a disposal site or a water channel, is built solely for the benefit of their own business or industry. This is due to the local government's lack of regulations concerning collaboration between the private sector and the community. Hence, the private sector's role in infrastructural development and collaboration with residents has not been maximized. Furthermore, there is still a negative perception or stigma that business actors have of local government officials.

There are fees that are unofficial to investors, increasing the costs of investing and partnering with the regional government. As a result, due to the government's limited financial resources to ensure infrastructure availability, a government and private collaboration scheme in infrastructure procurement for mutual interests is required.

The influx of investors increased the demand for labor and expanded employment opportunities, thereby resulting in an increase in Palu's population. Although the largest population increase in Palu occurred during the centralization era (between 1980 & 1990) with a total of 99,914 people due to the transmigration program, during the decentralization era, there was also a significant population increased. Between 2000 and 2010, Palu's population increased by 52,218 people as a result of the impact of industrial activity development, the city's economic growth, and the religious conflict that occurred in Poso. When compared to one of Indonesia's major cities, Surabaya, which experienced a population increase of 4.94 % from 2000 to 2010 (KATHERINA, 2017), Palu experienced an increase of 18.36 % during the same period. This phenomenon is consistent with Birkmann's (2016) theory, which states that intermediate cities grow faster than large cities. Economic growth in Palu accelerated during the decentralization era in comparison to the previous era. As a result of changes in the government system, regional government policies were aimed at attracting investors and business actors to open or expand businesses in Palu; this has become one of the factors driving economic growth. Furthermore, population growth, labor force participation, and the number of workers in Palu are all rising, which is a positive factor in stimulating economic growth. This means that the larger the labor force is, the more goods and services that can be produced, increasing the domestic market's potential.

The increase in the GRDP in Palu during the decentralization era, especially between 2012 and 2020, reflects a better level of income for the people in the area, while the increase in the non-economic sector indicates an improvement in the level of health, education, housing, the environment, and other aspects of society. As a result, the GRDP aggregately demonstrates the region's ability to generate income or remuneration for

with an increase in the HDI. When the HDI rises for a given location, it is reasonable to assume that the level of community welfare will rise as well (Sukirno, 2010). A study conducted by Lee Jong Hwa (1997) explains the relationship between economic growth and human development in the Republic of Korea from 1945 to 1992 and found that the two indicators have a close relationship. Economic development can be aided by strong economic growth. Increasing the quality of human development, on the other hand, can boost economic performance (Arsyad, 2018, p. 16). According to Palindangan (2021), the relationship between economic growth and human development, can also be explained through policy and government spending. However, the HDI is increasing in Palu, despite the fact that economic growth is fluctuating. This suggests that an increase in economic growth is not always accompanied by an increase in the HDI. It indicates that government spending factors can still influence the increase in HDI. Human development, on the other hand, has a positive and significant impact on regional economic growth.

Palu's new government system created a plethora of job opportunities. This led to urbanization which produced both educated and uneducated workers. Workers who are educated and skilled are more likely to find formal employment with higher pay, while those who are uneducated are often forced to work in the informal sector or remain unemployed. If this trend continues, Palu's employment opportunities will be scarce, making it difficult for many people to find work. This will likely become a burden for Palu and continued urbanization will exacerbate the current poverty situation. The presence of an educated workforce as a result of urbanization also contributes to the rising value of Palu's HDI. The rising HDI reflects the improved quality of human resources. However, the improvement in Palu's human resources has not been matched by an increase in adequate employment opportunities, resulting in a fluctuating unemployment rate. This indicates that a high HDI alone will not suffice to alleviate poverty because the community lacks employment opportunities.

Government spending on the social sub-sector, which is summed up in capital expenditures, is the determining factor. The magnitude of these expenditures can be used to estimate the government's contribution to human development. Government spending in the areas of education and health has a positive impact on human development (BRATA, 2005). The higher the allocation of funds for education and health, the higher the HDI will be. According to Maria (2011), government spending on education and health can have an impact on poverty if it is used to improve the quality of human development. Expenditure in the public sector will increase population productivity. Increased productivity, in turn, encourages economic growth through increased human development, which has a positive impact on poverty reduction. The local government's performance in providing education and health care for the population will reveal the government's response to the problem of low-quality human capital. Palu's local government must be able to ensure that the community's right to health is protected by providing equitable, adequate, affordable, and high-quality health care. Basic education, which the government defines as a nine-year compulsory education program, is the most basic public education service. The government has to ensure that all children have access to education, which necessitates a significant education and health budget allocation. As a result, Palu's local government must pay close attention to its public policy in order to reduce the number of poor people in Palu. The local government must also be serious about allocating pro-poor education and health budgets to support economic growth in order to meet their targets.

Chenery (1979) and Syrquin (1986) contend that changes in economic structure are an indicator of a region's growth and, according to economic theory, economic growth is always associated with a reduction in poverty levels; a region's economic slowdown, on the other hand, will encourage an increase in poverty rates (RAY, 1998). However, this is not the case in Palu. The declining rate of economic growth (see table 1) was followed by a decrease in the percentage of poor people (see fig. 14). Local governments implemented poverty alleviation programs, such as cash and rice assistance, which

resulted in a reduction in the poverty rate. It can be concluded that a decline in economic growth does not always result in an increase in the poverty rate.

5.2.3 Comparison with other Medium-Sized Cities

Decentralization led to regional expansion and it occurred massively during the decentralization era. Approximately 200 new cities in Indonesia have been established in the 20 years since decentralization began. The disadvantage was that there was no collaboration between regions, which led to fragmentation. Palu had four sub-regencies during the centralization period, but during the decentralization period they increased to eight. The increasing demand for housing, combined with the limited space in the innercity, led to the sub-urbanization of the lower-middle income group; as a result, rural land was converted and the urban area of Palu expanded into the periphery. However, Palu's experience is likely to differ from that of Western countries due to rising income and leisure time, as well as transportation progress (BERRY 1981, p. 55). Palu's "sub-urbanization" has not been accompanied by adequate development of urban services and infrastructure. As a result, people in the outskirts who work primarily in the city center continue to rely heavily on urban facilities and services in the core.

Palu's development was different compared to other medium-sized cities in Indonesia. For instance, there is much difference to the development of Bekasi and Depok, two cities surrounding Jakarta. Because of their geographic locations, these two cities' formation and growth has been faster and more advanced than Palu's. Cities on the island of Java have a relatively flat morphology, making it easier for them to grow in any direction. The advantage of this morphological condition facilitated the development of adequate infrastructure and an integrated rail network throughout the cities of Depok and Bekasi. In contrast, although Palu has a port, the Central Sulawesi region is limited due to its vast territory and uneven morphological conditions. Sulawesi's cities are generally separated by mountains and steep roads. When compared to other medium-sized cities in Java, Palu and Makassar (the largest cities in Eastern Indonesia) are separated by a considerable distance. The slow development of the regional roads and

transportation networks that connect Palu to other cities outside the Province of Central Sulawesi exacerbates the situation. Although Sulawesi's regional road network has been under construction since the era of centralization, the region still lacks a railway network capable of connecting all parts of the island. Thus, it can be said that Palu is not very connected to the global network. According to David Kaufmann (2019), the advantages and disadvantages of medium-sized cities are still largely unexplored and the impact and relevance of their regional policies are very unclear. However, when considering the differences in the urban development of Depok, Bekasi, and Palu, one can see that the connection and geographical location of small and medium-sized cities, especially those neighboring large cities, has an impact on the development of these cities in terms of economic, demographic, and political aspects.

Since the concept of intermediary cities defines urban agglomerations based on their role that provides economic links between rural towns and metropolitan areas in the national municipal system (Bellet, 2003; Bolay & Rabinovich, 2004) this concept directly relates to Palu. The existence of Palu as a growth center is expected to have a positive effect on increasing economic growth in the surrounding areas. According to Ramlah's (2017) research, Palu, as a growth center, is in close interaction with Donggala regency, Biromaru regency, and Parigi regency. This is due to various factors, such as their distance, population, and regional income. Donggala regency has the strongest spatial interaction with Palu, followed by Biromaru regency and Parigi regency. One of the main reasons why Donggala regency has the most connections to Palu is because of the distance factor. By land, Donggala is approximately 30 km from Palu. Meanwhile, the capital city of Parigi regency is 84 km away. However, the fast-growing economic sector in Palu, namely the tertiary sector, has less impact on the economic growth in Biromaru and Donggala regencies, where the primary sector plays a major role. The only connection between these two regions and Palu was in the supply and distribution of goods.

Palu exemplifies the concept of rural-urban linkages because it is a transitional or border area between rural and urban areas. However, even though Palu is classified as an

intermediate city because it has characteristics such as a relatively high population number and population density, as well as diverse infrastructures and facilities, it is not yet optimal in its role as a city that can provide economic relations between rural towns and metropolitan areas. The current connections between Palu and the surrounding areas are not all mutually supportive and synergistic. As a result, disparities in development between regions have emerged. Due to the city's mismanagement of spatial planning, Palu must increase its capacity to collaborate with surrounding regions in order to deal with urbanization, both in terms of managing the development process and providing urban services. Outside of Palu, there is a large proportion of natural resources — resources that the city needs to cope with increased urbanization and service demands. Donggala and Biromaru regency, for instance, have sufficient agricultural resources (such as rice) to support the city, and Palu has a sufficient distribution capacity. Thus, it is essential to optimize Palu's linkages with the surrounding areas as a medium-sized city by enacting appropriate spatial and economic policies.

According to Hildreth (2007), medium-sized cities, unlike large or metropolitan cities, do not typically offer the economic benefits of larger market sizes, labor markets, and knowledge exchanges throughout urban areas. Intermediate cities have a more localized economy in the industries in which they specialize. Apart from the service sector, the mining & quarrying sector is the most important sector that Palu offers to its investors. Palu, located on the West Coast of Sulawesi, has a port that has the potential to become a trading center for various agricultural products, construction materials, and various other commodities. Until now, Palu has frequently advertised its local potential to attract the attention of investors. While large cities are more likely to develop sectoral strength in advanced producer services, the composition of specialist sectors in Palu is more diversified. According to the interviews, some large investors are interested in investing in Palu because the cost of construction labor and land is lower than in big cities, allowing them to make more profit. Citra Land, for example, has previously only built luxury housing complexes in Indonesia's large cities, but they began constructing these

luxury homes in Palu since 2012. Palu offers housing land at a lower cost than large cities, but the people of Palu do not have the same purchasing power as inhabitants in larger cities. Thus, the number of luxury homes built by the developer is less than in major cities. As a result, Hildret's point of view can be applied to Palu as well.

According to Salim (2006), Indonesia implemented one of its urbanization policies to balance the growth of large and metropolitan cities. Palu's planned development is in line with a neoliberal concept of development that emphasizes the economy by itself, as evidenced by the construction of malls and modern social facilities such as recreation centers and other amenities. This approach only emphasizes the economy despite the fact that unregulated economic growth does not always lead to the best results. The increasing economic growth in Palu, as well as the creation of employment opportunities with the construction of industries and services, attracted migrants from small towns and villages nearby. The availability of higher education facilities, a pleasant modern life, and a variety of entertainment facilities motivated young people to pursue their dreams of progress and prosperity, resulting in employment in rural areas appealing less to young people. When it came to education, expertise, and concern for environmental quality, some of the people who migrated to Palu exhibited low levels of these characteristics. Ultimately, this had an impact on social issues, the environment, and the physical structure of the city.

In terms of urbanization, medium-sized cities have a much lower capacity for dealing with the resulting issues than large cities. The main problems caused by Palu's rapid urbanization were the city's urban structure and carrying capacity since there was a struggle to keep pace with the city's rapid growth. For instance, the majority of vacant land is currently located in river basin areas and disaster-prone zones that do not have adequate urban infrastructure. However, because housing costs are cheapest in these locations, many illegal structures have been built there in recent years.

5.2.4 Urban Sprawl and its Impacts on Urban Environment

Peri-urbanization, the process of urban transformation in peri-urban areas, has emerged as a critical and fundamental phenomenon in today's globalized society. The development of irregular settlements, new towns, industrial zones, and other large-scale urban features in the vicinity of major cities can exacerbate peri-urbanization (WEBSTER, 2002). In line with this, the urbanization process that occurred in Palu and its surroundings has shown the occurrence of the second stage of the urbanization process, as evidenced by the manifestation of rapid population growth and the emergence of improper settlements on the outer perimeter of the city, which is much faster than the urbanization process in the city center (which is a result of slowing or saturated growth). In other words, the urbanization process in these areas was characterized by the expansion of urban areas, and was accompanied by the phenomenon of urban sprawl into the periphery, which was not only caused by a shift in activities from the main urban areas to the periphery, but also by the internal growth in the rural areas. According to interviews conducted with academics from Tadulako University, demand-driven housing development is taking place, particularly for low-income housing. Communication in the land market has also contributed to regional housing development. Developers have attempted to enter the municipality's land market, piquing the interest of some residents, particularly those in the middle class. However, this has not always been successful, as houses on expensive land are frequently out of reach. People prefer development areas that are outside of the city center but close to the core because they have better accessibility and basic infrastructure facilities. As a result, the overall pattern of residential location is as follows: higher-income residents mostly live in the city center, while middle and lower-income residents live near Biromaru and surrounding areas. Development in Palu has a tendency to concentrate in Biromaru, while Donggala has experienced very little growth. Geographical characteristics, such as the fact that the Donggala city region is dominated by hills bordering the sea, along with a lack of adequate infrastructure, have

restricted development in this area, in contrast to the Biromaru area, which tends to be flatter and is situated in a valley that is flanked by two hills.

The phenomenon of urban population growth has many implications for environmental and social problems. Remi (2017) and Watson (2009) stated that urban population growth is becoming an important phenomenon in many developing countries and that it is critical to consider when planning for sustainable cities, especially because these countries often face multiple challenges related to rapid urbanization and weak governance capacity. As mentioned before, Palu's population growth began with the implementation of a population distribution agenda known as the transmigration program during the era of centralization and has continued to grow through the regional autonomy policy during the era of decentralization. Palu's initial development and job opportunities coincide with the increased population, but this created a problem because Palu's urban structure and carrying capacity are insufficient.

Decentralization policy resulted in more locally rooted development, with local governments having more authority in managing their territories. Building permits can be issued widely for the development of new housing and commercial areas, owing to the possibility of increased tax revenues. Furthermore, urban reality in Indonesia is typically the result of market mechanisms while spatial plans only follow growth and current trends. According to the new Indonesian planning system, the government's primary role is focused on plan-making and development control, while its capacity to implement plans becomes rather weak as a result of neoliberal values (Hudalah & Woltjer, 2007). This is evidenced by the large number of new homes built in Palu that are located in disaster-prone areas and lack adequate infrastructure facilities, such as good drainage, road access, and evacuation areas in the event of a tsunami. Land administration and development procedures have rules and developers must adhere to an approval mechanism when carrying out housing projects. Although the spatial zoning mechanism reflects a regulatory system, development processes denote a more discretionary mechanism in which any activities or uses of land can be proposed and compromised. As

Mokone (2013) pointed out, it is difficult to predict the stability of land markets in countries like Indonesia that have strict land use regulations while experiencing rapid urbanization. As a result, municipalities tend to pursue profit-seeking behavior in land markets.

The low utilization of spatial planning tools as a reference for coordinating between cross-sectoral and regional developments in Palu resulted in a failure to consider sustainability. The desire for short-term economic benefits frequently leads to the overexploitation of natural resources, thereby reducing the quality (degradation) and quantity of natural resources and the environment. Furthermore, there was frequently an inefficient use of space as a result of Palu's population growth and its high demand for settlements. As a result, many low-cost settlements as well as semi-permanent housing was built on land that did not have building permits or adequate infrastructural facilities. There are informal settlements along the Palu River, as previously mentioned. The local government is having difficulty relocating people from the riverbanks because the population is quite large, and relocation to a new area costs a lot of money. As a result, the government's option is only to revitalize the area in order to reduce the stigma of these marginalized areas. Although the local government has made efforts to revitalize the area, these efforts have not been successful. This was because the physical revitalization of the area was not accompanied by social and economic rehabilitation of the community. Rather than simply creating a beautiful place, the success of revitalizing an area will be measured by its ability to create a productive and healthy environment. Revitalization must be capable of improving the dynamics and social life of a community (Martokusumo, 2008). Government and society must be able to collaborate in order to create a social environment that has educational value and improves people's lives.

As previously stated, the government's revitalization has received a positive response from the surrounding community, but the community desires an improvement in their economic circumstances. So far, the river has only served as a dumping ground for riverside residents. Economic revitalization of the riverside community can be

accomplished by utilizing the Palu River's potential as a tourist destination. Local residents can use the construction of tourist facilities in the river area as a source of economic activity, thereby increasing their income. As a result, this is expected to raise public awareness about the importance of protecting the area as a source of livelihood.

Revitalization is an alternative solution to the problem of uncontrolled illegal settlements. But the main point is that the government of a city must have careful planning and control over the physical development of the city, buildings, and land use before illegal housing and marginalized areas appear and grow out of control. The government should also encourage information related to safe residential areas because there was no recommendation on whether or not dwellings were safe to live in. Palu, like other medium-sized cities in Africa and South Asia, experienced horizontal growth that was largely unplanned and that occurred in areas where land use regulations were not enforced. One of the phenomena that occurred in Palu was similar to one that occurred in Lagos, Nigeria's largest city with a population of 22 million people. Only a few decades ago, Lagos was a small coastal city (MAHENDRA, 2019), yet as a result of its rapid growth, the city's facilities and infrastructure suffered a significant decline in quality. Palu's inadequate urban planning and ineffective land use regulations have resulted in the emergence of low-cost housing in areas without (or with limited access to) services. Therefore, the management of Palu as a medium-sized city should be undertaken with caution and diligence in order to avoid the issues that arose in Lagos or other large cities.

As mentioned before, Palu has become one of the medium-sized cities that attracted job seekers as a result of regional autonomy and increasing economic growth. This demonstrates that if more economic opportunities can be created in medium-sized cities like Palu through appropriate regulations and investment, there is an opportunity to divert more migration to medium-sized cities rather than to big cities like Jakarta. As a result, it is necessary to improve and expand economic capacities of medium-sized cities in terms of management, regulations, and institutions (FIRMAN, 1991). Aside from that, service improvements for the convenience of residents are required so that regional

urbanization can be more controlled and play a larger role in regulating the flow of migration to big cities.

Decentralization and regional autonomy policies, while having an overall positive impact, cannot be denied as having some negative impacts as well. Decentralization and regional autonomy actually led local governments to focus on development in their respective regions by maximizing the utilization of available resources in order to increase people's welfare. Despite the fact that Palu's development has advanced in terms of infrastructure availability and economic improvement (in comparison to the centralization era), decentralization in Palu, which has been ongoing for more than two decades, has not met expectations. Although the poverty rate in Palu decreased during the decentralization era, the poverty disparity remained high. This is due to inequalities in human development, such as unequal access to education, health, and the economy. Economic growth in Palu was not followed by an increase in the well-being of residents as a whole. This is due to a trend in which the private sector in Palu is more involved in regional development due to a lack of government funds and supervision. Indeed, economic growth is more than just an increase in total national and regional output. Much more significant is how the unemployment rate can be significantly lowered and poverty drastically reduced. Therefore, although Palu was able to develop in an economic sense, community welfare did not significantly improve because the benefits of development were only enjoyed by a small group of people. There were many problems that were solved through decentralization. In the case of Palu, it was primarily viewed as an opportunity to develop the region through extensive autonomous affairs and the authority to regulate the available resources. In other words, decentralization and regional autonomy were still considered as reform tools as well as basic prerequisites for successful development in Indonesia.

5.3 Disaster

As mentioned before, the damage of the natural disaster in Palu appears spatially random and anomalous. Driving North from Palu along the bay's coast, most villages

appear fine, then suddenly, there are entire areas of rubble that were washed away by the tsunami or submerged in mud. This is due to Palu's geological conditions, which reveal that the city and its surroundings are found on a variety of rock units ranging from old to young, such as metamorphic and intrusive rocks, old colluvium deposits, young colluvium deposits, old Palu River deposits, and young Palu River deposits. Each rock unit in this area responds dynamically to earthquake vibrations in a different way (BADAN GEOLOGI, 2018). As a result, when an earthquake occurs, some areas appear to have significant damage while others appear more intact.

5.3.1 Impacts of the Natural Disaster in Palu

Natural disasters have a considerable impact on development. Developmental achievements that had been carefully built over time can be suddenly destroyed when a disaster occurs. Furthermore, if disaster-response capacity remains low, the natural disaster's impacts will be significant, both in terms of casualties and economic losses. Earthquakes, for instance, can cause asset damage, death, injury, and a loss of supplies, communication, power, water services, social services, businesses, and social structures (DAVIES ET AL., 2018). Chong (2018) describes the impacts of disasters as causing physical damage, loss, or damage to property and infrastructure, as well as psychosocial, sociodemographic, socio-economic, and socio-political disruptions. The 2018 natural disaster in Palu was classified as a large-scale disaster that immediately reduced productive capacity on a large scale, resulting in hefty financial losses. For a certain time, development growth in disaster-affected areas becomes negative or declines.

The post-disaster is the final stage that encompasses the most recent developments in Palu. The natural disaster that struck Palu in 2018 severely damaged many areas and buildings, as well as the economy and social life of the community. According to several informants during interviews, the local government's response to disaster management, particularly housing assistance as part of the post-disaster reconstruction process, was not in line with community expectations. Initially, data collection for each household was carried out for those affected, but the data collection

continued to be carried out repeatedly, making the community less trusting of those who asked for household data. This was due to the fact that the provision of residential houses (both temporary and permanent) to people who had been registered as disaster victims was progressing very slowly, with major delays, and the assistance was often not provided properly. Uncertainty in information and ineffective policy implementations undoubtedly contributed to inhabitants' negative perceptions of the government. To reduce the occurrence of these problems that had an impact on the successful implementation of government programs in disaster management, a strategy in evaluating the process of program socialization and information provided by the government (either directly or through media) is required. This evaluation was also conducted to reduce the residents' uncertainty about realizing their hopes of changing their lives for the better following the natural disaster in Palu.

5.3.2 Natural Disasters in Palu in the Era of Centralization and Decentralization

The transition from the centralization era to the decentralization era resulted in changes in the pattern of relations between the central and regional governments from hierarchical to relatively autonomous governance. Shifts in the pattern of this relationship had implications for changes in Indonesian regional disaster management strategies and concepts. There are differences in how the disaster management concept was applied during periods of centralization and decentralization. The paradigm of disaster management in the centralization era tended to be reactive-curative toward the disaster event and a centralized-hierarchical bureaucratic system was utilized. Although in the era of centralization (1968-1998) all policies related to disaster management could be implemented without significant public criticism or resistance to government responses or policies, the concept had weaknesses such as disaster (mis)management and ineffective distribution of aid to the victims (HARYATI, 2013). This occurred because the central government did not involve local governments and communities in the policymaking. In contrast, since the era of decentralization, local governments are directly involved and have greater responsibility in disaster management. The natural disaster

that hit Aceh, a capital city on the northwestern tip of Sumatra Island, during the early years of the decentralization era provided many lessons for disaster management and the Indonesian government (Daryono, 2021). The earthquake and tsunami disaster that took place in Aceh on December 26th, 2004, was the largest ever recorded in Indonesia. According to World Bank data (2008), the total number of victims, both dead and missing, reached 167,000. Furthermore, over 500,000 people lost their homes. At the time, the Indonesian government had not provided tsunami early warning system facilities to tsunami-prone areas, and people were misinformed about of these natural disasters and how to save themselves when they struck.

As a result, a previously reactive-curative paradigm has shifted to anticipatory-preventive disaster risk reduction, although not all local governments have adopted the paradigm shift in disaster management. Publications on urban disaster risk and resilience are largely based on the experiences of big cities and national or regional capitals, with little attention being paid to the experiences of smaller cities (Bello, 2020; Benson, 2004; Gencer, 2018). In one of the few journals that review risk across different settlement types, Cross (2001) argues that small and medium-sized cities struggle to gain acknowledgement in disaster research and policy due to their limited human and economic impact in comparison to large city events. Disasters in a major city or capital can affect more people and cause regional damage, whereas disasters in smaller cities are usually felt locally (RUMBACH, 2016).

According to Rodriguez et al. (2010), natural disasters reduce human development and increase poverty, and this effect can be significant. In terms of human development gains over the 5-year period examined, the average impact on affected areas resulted in a human developent regression equivalent to two years. Natural disasters have a greater impact on municipalities with lower levels of human development, while they have no effect on wealthier municipalities (p. 4). Overcoming hazards is more difficult due to a number of factors, including low productivity, stalled economic growth, a lack of access to productive assets (such as water, credit, etc.), a lack of financial reserves and safety

nets, and wide inequalities across geographic, economic, or ethnic lines. This vulnerability can be exacerbated by a lack of facilities, limited access to remote areas, and a low level of education. As a result, the covariate nature of many natural hazards, as well as the policy-induced macro conditions influencing the speed and likelihood of successfully coping with them, may reflect varying welfare impacts at the district and sub-district levels (Rodriguez, 2010).

Concerning natural disasters, Lindell and Prater (2003) emphasize the importance of determining the impact and the affected agents. First, policymakers can use the information to determine whether external assistance is required and which options are most effective. Second, specific segments of the affected areas can be identified, such as how low-income households, locality characteristics, etc. Third, it can be used in disaster management to plan assistance for natural disasters and their potential consequences. They also explain how to determine the true impact of natural disasters by taking into account other factors such as mitigation practices, emergency preparedness, and assistance, among others.

In the context of disasters and disaster risk management, Rumbach (2016, p. 123) lists and describes four characteristics of small cities that set them apart from larger urban areas. First, small cities suffer from distance tyranny; their physical, cultural, and political isolation from centers of power and influence renders disaster risk management policy, resources, and research less reflective of their needs and priorities. Second, there is a misalignment of risk and capacity. Many of the risks associated with urbanization are experienced by small cities that lack the capacity even for basic planning or urban management. Third, the rate of urbanization in small cities frequently outpaces the rate of environmental learning. Fourth, small cities lack redundancy in critical areas for disaster risk reduction, particularly in infrastructure and civil society.

Several earthquakes and tsunamis have struck Palu and its surroundings since 1927 (Daryono, 2011). Some studies on vulnerable areas in Palu were conducted by a number of academics. For instance, Ramadhani (2011) studied the seismicity conditions

and their (potential) impact on Palu. She found that Palu had a very high level of seismicity, which was further supported by an Indonesian earthquake zoning map from 2010, which indicated that a severe earthquake could result in a massive disaster.

In disaster management, the pre-disaster phase is critical. This is the stage at which preparedness capacity is accumulated. It entails the accumulation of knowledge (for example, risk assessment, scenario and forecast model) as well as the response policies to future disasters. Prior to the 2018 earthquake, tsunami, and liquefaction, it should have been a priority to improve the detailing of scientific uptake for evidencebased policymaking for Central Sulawesi districts (TRIYANTI, 2022). However, Palu's government did not fully prepare for potential disasters. An indication that stakeholders in Palu tended to ignore the potential destruction of disasters was obtained from the results of interviews with WALHI (The Indonesian Forum for Living Environment) that works on a wide range of issues, including agrarian conflicts, access to natural resources, and disaster risk management. WALHI claimed that almost all mining industries in Palu were located in disaster-prone zones and that the local government did not pay close attention to this issue. Furthermore, Triyanti (2022), who studied the key factors for contextualized Systemic Risk Governance in Indonesia, discovered several gaps in the causes of the massive impact of the Palu disaster. This included limitations in understanding the tsunami hazard, failure to include potential liquefaction flows, and limitations in understanding the size of the tsunami. Furthermore, failure to predict earthquakes along the Palu-Koro Fault and their exact location aggravate risks, as do limitations on incorporating built-environment details into risk assessments. Lastly, there was never any self-rescue or disaster response training in Palu prior to the natural disaster of 2018. This is supported by the findings of interviews with people who claimed to have seen arrows pointing in the direction of evacuation sites but did not understand what the signs meant or where the evacuation locations were. As a result, when the natural disaster struck, people did not know how to properly save themselves and were not prepared to meet basic human needs during the emergency. Moreover, although the Palu Disaster Risk Assessment document has mentioned a high level of earthquake and tsunami vulnerability, it did not provide details pertaining to the characteristics of a potential tsunami, the estimated preparation times, and information on the city's location on the Palu-Koro Fault (PuSGEN, 2019). Thus, the natural disaster that occurred in Palu in September, 2018, resulted in thousands of lives being lost and caused massive infrastructural damage.

A paradigm shift in disaster management should become the norm for the local government, regional governments, businesses, and the public in Palu in order to pay more attention to anticipatory-preventive efforts. This would include prevention, disaster mitigation, preparedness, and early warning activities, in addition to curative-responsive activities in the emergency response and recovery stages. In fact, many regencies and local governments in Indonesia do not follow the rules nor do they have a shared understanding of a disaster management concept. For instance, a study conducted by Marfai (2008) showed that flooding in Semarang was more intense and destructive than in other cities on Java's North Coast. Tidal flooding has hampered social and economic activities. Since 2016, a Semarang sub-regency has lost IDR 7 billion per year. The central government has made various efforts, but poor coordination among local government work units remains a major impediment. These agencies have different interpretations of whether a tidal flood is a disaster. This resulted in a less-than-optimal response to the tidal flood disaster, and it eventually appeared partially.

The lack of an agreement reflects the tension between work units in the provincial government and work units in the city government. With all of its budget constraints, it appears that the provincial government delegated responsibility for dealing with tidal floods to the city government of Semarang. On the other hand, the Semarang city government requested additional assistance from the Central Java provincial government. The presence of a bureaucratic flaw in disaster management may cause more victims and losses to perish due to delays in aid.

To build sustainable urban resilience, stakeholders must share a common understanding of disaster management, including the concept of resilience. However, fragmentation has always occurred between stakeholders regarding the term of resilience, such as differences in definitions, goals, and motivations, making implementation of the concept problematic (Cutter, 2016). Implementing urban resilience requires cooperation and collaboration among government agencies, nongovernmental organizations, private businesses, and the general public (Cheller, Waters, Olazabal, & Minucci, 2015). Implementing urban resilience presents a unique set of challenges, including extensive coordination between government and nongovernmental organizations, adaptability to changing social, political, economic, and environmental conditions, distinctive time horizons between implementation and the anticipated threat, and a diverse set of results to be measured and evaluated. These challenges are in addition to the traditional ones of resources, political will, and adoption (Shamsuddin, 2020).

Furthermore, population growth due to urbanization was not accompanied by adequate infrastructure facilities, effective control of regulations regarding urban land use, and proper spatial planning, leading to the establishment of low-cost housing in disaster-prone areas. People's limited purchasing power forced them to live in these low-priced housing areas. Moreover, local governments only considered decentralization and regional autonomy in terms of economic growth as well as organizing and accelerating development in their respective regions. As stated by Wamsler (2004), urban governance regimes have traditionally focused on economic growth or livelihood generation rather than disaster risk management.

The Indonesian government operates a National Logistics System (Sislognas), its roadmap being established by Presidential Regulation No. 32 of 2012. This system, however, has not paid attention to the logistics of dealing with disaster emergencies. As a result, when a fairly large disaster occurred, such as in Lombok, West Nusa Tenggara in

July and August, and Central Sulawesi in 2018, Indonesia was not prepared to send disaster management logistics to affected areas.

After the natural disaster in Palu, the government's response and assistance from outside the region appeared slow due to the disaster's widespread escalation. Accordingly, people (especially those with low incomes) had to rely on government assistance to meet their basic needs. The power grid and several other facilities, such as banks, gas stations, and hospitals, collapsed shortly after the disaster and did not operate until a few days later, making it difficult for the victims to meet their basic needs. As a result, widespread looting occurred in the aftermath of the disaster. Furthermore, the limited access to refugee camps due to damaged roads made it difficult for many communities to obtain assistance. There was also a limited supply and high demand for fuel. As a result, looting also occurred at refueling stations. This situation was aggravated due to the large number of migrants living in Palu from nearby Provinces such as South, North, and Southeast Sulawesi. When the disaster struck, many of these migrants chose to leave Palu via land to get back to their hometowns because the airport was closed due to damages. Hence, in order to get sufficient fuel for their return journey, they competed with other residents. Many survivors looted, but many more were more concerned with finding their relatives who had vanished. People's reactions to disasters were diverse. According to Mardiatno (2017), the differences in reactions were caused by each individual's level of panic. Panic occurs when humans are unable to think clearly due to fear and anxiety about the dangers of natural disasters. This mental state was exacerbated by external factors such as fake news spreading about another major disaster occurring or news saying that the government was allowing disaster victims to collect free goods from certain retailers. Such chaotic conditions in Palu would not have occurred if the local government had been competent in disaster mitigation and management, which would have allowed for education and preparation for disaster occurrences in communities.

The looting in Palu revealed many issues related to Indonesian disaster management. The establishment of a solid disaster emergency logistics supply and distribution system in Indonesia is critical. Indeed, consumption activity centers can play a critical role in this regard, necessitating close collaboration among the government, business actors, and security forces. Better control over the supply of information to the public during the critical post-disaster period is also required. This is done to reduce uncertainty and control the dynamics of the affected community groups. Only through more comprehensive collaboration and protocols for dealing with post-disaster crisis situations among the government, business actors, security forces, and the media can information confusion and public psychological shocks be controlled, preventing destructive actions such as looting.

Palu's government was unaware of the importance of constructing city resilience. It overlooked that, if a major disaster occurred, all development completed thus far could be destroyed. Successful governance from afar is challenging due to Palu's size, diversity, and distance from Jakarta as the capital city of Indonesia. Low government disaster mitigation capacity, failed early warning systems, lack of community knowledge about disaster anticipation, lack of shelter availability, and limited spatial planning are all factors that contributed to a large number of disaster victims and high levels of building and land damage. Rumbach (2016), Tierney (2012), and Adelekan (2015) mentioned that, unlike large cities, small and medium-sized cities lack components that have the potential to create effective disaster management, such as a variety of actors, institutions, regulatory frameworks, government planning, legislation, physical resources, and the private sector and civil society entities. Furthermore, poor planning and infrastructure have a negative impact on communities in terms of safety, economics, and social life when extreme events or disasters strike developing countries.

Economic problems arose as a result of people losing their jobs and income, as well as the damage to infrastructure in Palu. Another factor was capital transfers, which were previously used for businesses but had to be used after the disaster to survive.

Resource depletion endangers development and can result in reduced large-scale production capacity and financial losses. Many businesses that used to support Palu's residents ran into difficulties and stopped operating due to infrastructural damages, thereby increasing the rate of unemployment. Disasters necessitate recovery, rehabilitation, and reconstruction for the local economy to recover. All of this requires financing that frequently exceeds disaster-affected regions' financial capacity, putting countries with limited resources at risk of increasing their national debt. USSAID ASIA (2007) stated that the social and economic factors that affect a community's socioeconomic resilience are the amount of income, the type of businesses that are affected, and the amount of savings held by people to deal with disaster effects.

The complexity of Indonesian society's conditions in terms of demographics such as population density and economic aspects such as poverty (which remains high), have contributed to the country's vulnerability to natural disasters. According to a study by Palm and Carroll (1998), people who are poorer and have lower incomes perceive more risk and feel more concern about both natural and technological disasters. They are more vulnerable to natural disasters because they frequently have to settle in high-risk areas for economic reasons (HALLEGATTE, 2012), especially in areas where land is limited. It is evident that at-risk areas are oftentimes significantly less expensive than their low-risk counterparts (DANIEL, 2009). Correspondingly, low-income communities were the most vulnerable to the Palu disaster of 2018. This was shown by the highest degree of damage found in low-cost housing areas on the periphery, precisely in Petobo and Balaroa, while most luxury homes were unaffected. For instance, the Citra Land luxury residence that was developed by Ciputra Group, a large national company located right on the beach, had no visible signs of damage from the tsunami that hit the houses. This is due to the fact that the luxury residence is located in a green or safe zone and is equipped with safety facilities for breaking waves as well as consisting of a durable building structure. However, cheap houses built in periphery areas are generally constructed by local developers who reduce production costs by using cheap materials and simple foundations that are not in

accordance with the carrying capacity of the soil. As a result, they are able to provide low-cost housing in these peripheral residential locations.

Aside from the city's economic capacity, a lack of information about disasterprone zones was another reason why so many people in Palu lived in unsafe areas. The government's lack of interest in providing information can be derived from the official website of Palu's regional government. It provides little information about vulnerable zones and potential disasters despite being the only online source of media available to citizens. As previously mentioned, respondents confessed that they saw arrows pointing to evacuation sites when the disaster occurred, but they did not understand what the sign meant at the time. This indicates that the community's reaction to saving themselves was dominated by spontaneity due to a lack of self-rescue knowledge. Moreover, many people thought that natural disasters were beyond human capabilities and that they occurred without warning, so they tended to wait for the incident to occur or happened to them. This was because natural disasters are seen as unpredictable, uncertain, and unavoidable events that are uncontrollable (ТRIUTOMO, 2007). Furthermore, there is often a generalized belief that disasters are "God's will", in which natural disasters are an act of God that serves as a warning, trial, or even a curse, meaning that humans cannot or have no right to prepare for disasters (LINDELL, 2006).

The results suggest that both Palu's inhabitants and the local government were focusing their efforts on disaster management in the form of assistance and emergencies. As a result, most of the actions taken were reactive, focusing on aid rather than prevention. This was the same during the centralization era. As mentioned by Tierney (2012), rather than being focused on systematic risk and vulnerability assessments, disaster governance policies and systems are often reactive, concentrating on addressing issues exposed by a recent event. This approach aims to fulfill the most urgent of needs, such as food, shelter, and health. Satterthwaite (2011) mentions that the ability of local governments to mitigate or minimize disaster risk through effective planning in many developing countries is severely lacking due to their limited power and resources as well

as their often ambivalent relationships with the poorest and most vulnerable. This is very much in line with what occurred in Palu.

Stakeholders and the people of Palu would be wise to abandon the centralization approach to disaster management in favor of a more progressive one. Disasters are related to development issues. Thus, a development program must be integrated with disaster management, thereby emphasizing community preparedness in dealing with hazards on both an economic and social level as well as increasing the physical strength of building structures to minimize damage caused by natural events. Furthermore, disaster management efforts should focus on identifying disaster-prone areas, recognizing patterns that lead to vulnerability, and implementing structural and nonstructural mitigation activities, such as building construction and spatial planning (land use, building standards, etc.) (GODSCHALK, 1999). Municipalities, cities, and civil-society groups must improve their monitoring of hazards, human vulnerability, coping processes, and adaptation processes. Citizen monitoring could supplement government and international data and could involve a variety of groups. Finally, more emphasis should be placed on understanding how national and local governance influence community resilience in urban areas (BIRKMANN, 2016). The key may be to create a disaster management policy system and funding mechanism that values local expertise, creates local capability, but also acknowledges the vulnerabilities of small and medium-sized cities and works to fill the knowledge gaps (RUMBACH, 2016). Most people's objective in disaster recovery is "to restore the patterns of household, business, and government activity exactly as they existed before the disaster struck" (HUSSAIN, 2020, p. 313). In disaster recovery, there are three distinct types of social units to consider: households, businesses, and government agencies. During disaster recovery, local governments frequently discover that some households and businesses are unable to complete the tasks necessary in order to recover from the disaster. Households and businesses are primarily concerned with their own recovery, but government agencies must address the community's recovery needs. The economic recovery of some households occurs quickly,

while others take much longer. When a household or a business lack the knowledge or resources to recover, the government should assist them.

Economic recovery is positively linked to household income and negatively linked to structural damage and household size (Bolin, 1993). Families were an important support system for survivors in Palu, allowing them to recover quickly and resume normal daily activities. According to a survivor, his wife died during the disaster, so he and his toddler chose to live with his mother-in-law. He claimed that living with families was very beneficial in terms of taking care of each other and assisting in meeting basic needs. The same is true for families who came from outside of Palu to pick up family members who had been affected by the disaster. This demonstrates how family support helped many disaster victims in Palu. In some cases, small businesses are more vulnerable to physical hazards than large businesses because they are more likely to be located in non-engineered structures and have fewer resources to develop and implement hazard management systems to address their vulnerability (LINDELL, 2013).

The disaster that occurred in Palu in 2018 had a significant impact on the livelihoods of disaster survivors, particularly on those who worked as farmers, fishers, traders, and service workers. The disasters had varying degrees of severity for people depending on the type of job they held and the level of damage caused. This condition had an impact on the recovery of livelihoods, which could range from returning to work or business as usual, doing an alternative job for a relatively short period of time, to being forced to seek entirely new sources of income. One of the survivors who worked as a salt farmer explained that recovering from a disaster necessitates hard work and self-reliance rather than relying on government assistance (as was the case in refugee camps). Returning to his home (which had been destroyed by the tsunami) and immediately resuming his occupation by cleaning and re-managing his salt pond was part of an effort to get back on his feet. Furthermore, a group of salt farmers rebuilt their destroyed homes using improvised materials, such as material from the ruins of existing buildings around their homes or other substitute building materials like wood. This was because they did

not have many options and only had a small amount of money saved from their fishpond businesses before the disaster.

Several small entrepreneurs attempted to reopen their businesses three months after the disaster, but many were unable to do so and became unemployed. The lack of capital savings to restart businesses, as well as the assets lost as a result of the disaster, rendered them unable to borrow money from a bank. This was a major factor in the vulnerability of Palu's small businesses in the aftermath of the disaster. This corresponds directly to Alesch's (2001) findings that small businesses, in comparison to large corporations, are more likely to rely on local customers, lack financial resources for recovery, and lack access to government-sponsored recovery programs.

Based on observations and field data, the majority of disaster survivors were informal sector workers who created their own jobs. Agriculture and fisheries were the most important business sectors in Donggala and Biromaru, followed by community services, trade, restaurants, and accommodation services, all of which provided essential income to survivors in Palu. These informal activities were on a small-to-medium scale of business, but they were critical in supporting survivors' daily lives. The main issues concerning disaster survivors' livelihoods in Palu were the disruption of work (and source of income) and the time lag in the availability of livelihood sources between the emergency response period and the recovery period. The government's assistance was still limited despite the fact that it was needed to support the daily needs and livelihoods of survivor households, especially since logistical assistance was decreasing six months after the disaster.

Local governments must perform certain tasks, such as restoring services that were available prior to a disaster. Any critical infrastructure that has been damaged or destroyed must also be rebuilt by local governments. According to Rubin (1985). The ability of local governments to develop more effective recovery strategies had a significant impact on the speed, efficiency, and equity of community recovery. That is, communities recovered more quickly and effectively if they could identify and address

the specific problems that arose as a result of their unique circumstances. In the aftermath of a disaster, local governments must complete numerous tasks in a short period of time and many of these tasks must be done simultaneously. Local governments' regulatory functions are becoming increasingly important in land use and construction (LINDELL, 2013) and in planning for catastrophe rehabilitation and disaster response (SCHWAB, 1998).

The natural disaster that occurred in Palu serves as a wake-up call to reorganize areas based on disaster-prone maps in order to reduce risks and avoid massive losses and casualties. In Indonesia, post-disaster recovery is currently focusing on spatial planning and considering disaster-prone areas and permanent settlement areas. One option for achieving regional structuring based on disaster vulnerability is to resettle or relocate residents from areas that are classified as red zones (forbidden from being inhabited) to areas that are safer and more suitable for human settlement.

Loss of shelter, livelihood, food, and water have a significant impact on stability and urban development. A major driver of resilience is the togetherness and closeness among disaster-affected community members. If present, this togetherness strengthens group resilience and improves recovery, thereby promoting an increased individual resistance. Fothergill and Peek (2004) cite extensive evidence from several studies on the difficulties of people when interacting with bureaucratic systems to receive housing and other types of assistance. Lack of knowledge about the systems that provide aid to disaster survivors, discomfort with the systems, and issues with getting to and from disaster relief centers, such as transportation, child care, and work schedules, are some of the barriers they face. Furthermore, the lack of housing which can result from natural disasters exacerbates these issues (GREENE, 1992). The failure of the majority of post-disaster housing reconstruction projects can be traced back to a lack of problems with community participation, relocation issues, fraudulent use and waste of project funds, and ignoring local needs and culture (SMIRL, 2011). Poorly designed reconstruction projects that do not address communities' socio-cultural and economic needs are more

likely to be massively modified by the affected recipients, or to fail in part, if not entirely, to meet their objectives (SADIQI, 2012).

Post-disaster reconstruction projects should shift perceptions away from seeing housing reconstruction as a response to an impending emergency and, instead, should provide aid that addresses the affected population's long-term strategic needs (Sadiqi, 2012). Many governments assume that they must restore the disaster-damaged houses to their pre-disaster locations. However, it is becoming increasingly clear that restoring the community to its previous state will also restore the community's previous vulnerability to hazards (LINDELL, 2013). Palu's government identified several locations to be used as permanent shelters for disaster victims one month after the disaster. Six months after the disaster, the government began the construction of a shelter that would be used as permanent housing for every family who had lost their house due to the disaster. The shelter's location was made based on a geological study and the feasibility of new residences (BAPPENAS, 2018). However, some people refused to relocate. The refusal was motivated by several factors. One of the main reasons for residents' unwillingness to relocate was the status of land ownership. The lack of valid information regarding the status of land ownership in the new residential areas provided by the government resulted in many being unwilling to move to these areas. This is related to the loss of kinship between neighbors in the disaster-affected areas when community members are relocated to a different location. However, one phenomenon that was observed during the post-disaster was that people chose to gather with family, even if it meant leaving their previous social structure. This tendency was triggered by the fear of losing family members when disaster strikes. As a result, people preferred to live close to their families in order to care for each other. Another reason that residents refused to relocate was due to the concern that, if they relocated to a distant location, they would lose their source of income or would face an increase in transportation costs. Many also believed that the amount of income earned in the previous location would not be obtained after relocating to a new area.

The lack of clarity in regulations and information, as well as the lack of involvement of Palu residents in the construction of shelters, resulted in the rejection of the relocation of housing from the disaster zone to safer zones. The process of relocating people is critical to the recovery and reconstruction of areas affected by disasters. By actively involving the community and providing accurate and comprehensive information about the relocation plan, conflicts can be avoided and communities' worries about potential problems related to their new homes can be reduced.

In Palu, residents utilized various strategies in order to overcome the difficulties faced after the natural disaster of 2018. Based on White's (1980) three strategies, there are three types of community livelihood strategies: survival strategies, consolidation strategies, and accumulation strategies. Palu residents used these strategies as part of their effort to "bounce ahead". Becoming a construction worker, a motorcycle taxi driver, a street food vendor, or a laundry worker, were some of the most common livelihood strategies adopted by residents. People with low income employed survival strategies due to a lack of capital, skills, and connectivity. Underprivileged communities had no other options. As a result, becoming a day laborer or working odd jobs to meet daily food needs was a viable option. The consolidation strategy is a middle-income group strategy that prioritizes security and income stability through the processing of owned resources (WHITE, 1980). Reopening home industry businesses (woven fabrics, fried onion production, food stalls) and farmers repairing and reactivating salt ponds are examples of consolidation strategies used by inhabitants of Palu. Residents that were able to implement this strategy were supported by the savings and business capital they had prior to the disaster, allowing them to create new jobs that are more valuable than people that used survival strategies. According to Andrian (2013), households with a consolidation strategy can meet primary needs as well as secondary and tertiary needs. In contrast, the accumulation strategy was used by wealthy people or business owners who have a lot of resources (WHITE, 1980). The accumulation strategy was adopted by utilizing capital and all available resources, such as renting out land that had not been damaged by the

disaster for agricultural activities or settlement. These strategies were employed through personal effort, financial support of family and relatives, and government assistance programs.

Furthermore, different perspectives emerged on Palu's economic recovery. The government considered the return of residents to daily activities as a benchmark for economic recovery. However, Palu's residents believed that this was not an indicator of a community's economic recovery, because the income they were receiving did not match their previous income or meet their needs prior to the disaster. Overall, Palu's economy has not recovered because many people affected by the disaster are still unable to return to their old employment or find new jobs, and their purchasing power has decreased. This condition can be used by the government to redevelop the economy (particularly the leading sectors, such as the service, trade, and construction sectors) by investing funds from the central government, foreign aid, and the private sector in effective programs and community assistance.

The disaster events in Palu put Indonesia's disaster risk governance to the test. The magnitude of the disaster's impacts demonstrates that effective governance aimed at reducing risk and vulnerability remains a challenge. It is not always about technology when it comes to disaster preparedness. It is also about public awareness and risk perception, which are shaped by disaster mitigation governance before a disaster occurs. There are several reasons why the development process in Palu has been slow to include disaster mitigation. First, disaster mitigation was not one of the primary responsibilities of local governments, cities, districts, and provinces until 2014. It was only ten years after the Aceh tsunami that the local government law was enacted. As a result, disaster risk reduction initiatives developed in the aftermath of the tsunami and were slow to take effect at the local level. Second, many cities and districts have yet to implement or even have spatial plans with specific disaster mitigation strategies. Building codes and evacuation infrastructures, for example, should ideally be regulated and planned at the detailed urban planning level. Palu, for instance, did not complete and authorize its

disaster-related spatial planning prior to the 2018 natural disaster. Third, local governments are constrained by the availability of funds when it comes to disaster mitigation. In addition to the problems described above, another factor impeding disaster management performance is a lack of qualified personnel. When the disaster struck Palu, it was clear that the government's preparedness was inadequate, and it even appeared to panic. This is the result of government employees being hired and placed in positions that are inappropriate when considering their abilities and qualifications. This is in line with Iqbal's (2015) statement that the results of political decentralization elections do not solely depend on a politician's performance. As a result, local politicians have no incentive to respond to the needs of communities vulnerable to natural disasters. Therefore, disaster management does not function optimally. Human resource capabilities and qualifications must be prioritized over "Putra Daerah" when it comes to hiring employees and strategic positions since appropriate placement qualifications ultimately determine an organization's success or failure.

Disaster governance in the decentralization era is potentially better than disaster governance in the centralization era. Iqbal (2015), who studied the effect of fiscal and political decentralization on disaster victims, states that socially fiscal decentralization and regional autonomy play an essential role in increasing community participation in economic, social, and political activities. Economically, a decentralized policy that grants autonomy to regions will be able to respond to the needs of the people affected by the disaster. For instance, because the needs of disaster victims vary greatly in terms of number and type, these decisions cannot be made centrally without involving local governments. Finally, in relation to disasters, the process of fiscal decentralization and granting autonomy should develop local leaders' capacities to solve problems effectively. This begs the question of why decentralized approaches to natural disaster management (both before and after their occurrence) in Palu proved ineffective. The main answer lies in Palu's population density and size, and this affects how damaging a disaster will be. Due to Palu's growing population and the increased number of buildings in the

decentralization era, combined with limited and rising land prices, resulted in a significant number of people living in marginalized and disaster-prone areas. This is consistent with Benson's (2004) statement that the risk of disasters is linked to population growth. As the population grows, people become increasingly vulnerable when they reside in dangerous areas.

Furthermore, the most difficult, underlying problems in disaster risk governance in Palu are related to asymmetric power relations. After all, the governance process of disaster risk reduction is expected to facilitate communication between various actors and institutions while also dealing with vested interests. This is consistent with Asadzadeh's (2016) theory that governance is an important aspect of the concept of community resilience. Furthermore, Coles (2004) asserts that government and leadership shape a community's response to a disaster. The ability of governments to respond quickly is essential (Carlson, 2012). Moreover, it is claimed that the local government authorities lacked many leadership qualities immediately following the 2018 natural disaster in Palu. Some claimed that this occurred as a result of the local government's lack of commitment and experience in managing a disaster of this magnitude. This is in line with the theoretical concepts of vulnerability as described by De Sherbinin (2007), who stated that one of the important components causing the increase in post-disaster vulnerability is delays in government responses when a disaster occurs. Thus, the communities are more vulnerable as a result of the 2018 Palu tsunami.

6. Summary & Conclusion

This chapter will conclude the study by summarizing the key research findings in relation to the research aims and questions, as well as discussing their value and contribution. It will also examine the study's limitations and suggest areas for future research.

Population growth is so rapid in developing countries of Asia, that the United Nations has declared Asia to be the world's most densely populated region. According to

the data, medium-sized cities are currently experiencing rapid urbanization and growth. Palu, an Indonesian medium-sized city, has seen a similar phenomenon, with rapid urban growth and urban transformation occurring in the two decades since the government system was decentralized. However, the ongoing development of Palu was disturbed by the massive disaster that struck on September 28th, 2018.

This study aimed to investigate Palu's development and the factors that contributed to it, as well as the role of local government and society in shaping and adapting to various changes, including when the 2018 natural disaster occurred. The results indicate that the democracy movement and long-suppressed dissatisfaction with the centralized government sparked decentralization in Indonesia. Dissatisfaction was brought on by the Suharto era's New Order policy, which stressed regional identity or separatism while attempting to maintain the integrity of the diverse archipelago through a centralized government. Regional and cultural prejudice was exacerbated by this and the government's transmigration program often generated friction between ethnicities. This was especially true for local communities and immigrants who came from Java as it was perceived that the latter had a monopoly over economic opportunity. Additionally, the disparity in development between the eastern and western regions also bred resentment in society and, up until the era of decentralization, this sentiment has continued.

Economic competition between natives and immigrants as well as competition among candidates for regional heads in political elections is thought to be a contributing factor of regional conflict during decentralization. The potential for conflict was mitigated during the Suharto era by deploying military forces in order to restrict information and the freedom of communities that were thought to have the potential to spark conflicts that could escalate. In contrast to the previous era, freedom of press was given and the public was not restricted in organizing during the decentralization era. Furthermore, during the decentralization era, a policy was issued that limited military involvement in the political arena, so that conflict resolution could take place in a less repressive and

more peaceful way. Following Suharto's fall, ethnic and religious conflicts erupted in various regions as a result of inter-ethnic and religious sentiments that had existed since the Suharto era, particularly in Poso, though these conflicts had little impact on the overall harmony between Palu's residents. This is due to the influence of moderate Islam, which was promoted by Muslim religious leaders in Palu and was accepted by the Islamic majority of the local population. Correspondingly, when inter-ethnic and religious conflicts arose, such as the Poso conflict, relations between different communities were maintained. Thus, it can be concluded that Palu's moderate Islamic viewpoint contributed to inter-religious harmony.

Changes in the government system have had both positive and negative effects on Palu's urban transformation. The massive transmigration program promoted during the centralization era was the catalyst for a significant increase in Palu's population, which then formed the dominance of certain ethnic groups inhabiting certain areas in Palu. This dominance was reinforced by family ties and connections, so that each newcomer chose to inhabit a location close to people with the same ethnicity and religion. During the decentralization era, government policies that discriminated against certain ethnic groups in various fields were no longer issued. Nevertheless, decentralization with autonomy policies and direct regional head elections has given rise to a new phenomenon in the world of politics, namely the issue of "Putra Daerah", which grows in almost every region of Indonesia, particularly in small and medium-sized cities. "Putra Daerah" refers to a native's understanding of where a person was born and raised. The phenomenon of the "Putra Daerah" is a political issue that arises, especially during campaign and regional head elections. This issue is disseminated to the public in order to foster fanaticism toward certain ethnicities and reduce the popularity of political opponents who have ethnic backgrounds other than the ethnicity of the electoral district. As a result, many regional leaders and other strategic positions are filled by people simply because they are natives of the region, and qualities such as integrity, intelligence, policies, commitment, and the ability to lead a region often play a minor role. As a consequence of the "Putra

Daerah" politics, many competent and better-suited candidates are not elected to occupy strategic positions in regional governments. This is detrimental to local communities and the region because those with less competence are in charge of leading and issuing policies. As a result, many politicians take inappropriate critical actions due to their lack of qualifications. However, other ethnic groups that are not "Putra Daerah" are still allowed to participate in politics. In contrast to the centralization era, during which ethnic Chinese political rights were restricted, many Chinese have joined and established political parties and organizations during the decentralization era. The ethnic Chinese in Palu, on the other hand, prefer to conduct businesses. This is supported by the social and business networks that grew during the era of centralization when ethnic Chinese had fewer political rights and chose to turn toward conducting business. This factor caused ethnic Chinese to dominate businesses in Palu because they are more well established and have a strong business network.

Eventually, the decentralization regime passed new laws in Indonesia that shifted power concentrations from the central to local governments by delegating many functions to municipal and regency governments in order to administer governmental tasks within their borders. As a result, local governments now have eminent roles in determining development in their own domain, including the local economy. In this manner, it is hoped that local governments will be able to provide better services than a potentially distant central government. Since the implementation of regional autonomy, business opportunities in Palu have expanded. The local government took advantage of this opportunity by issuing policies to attract investors. As evidenced by the increase of investments into Palu, this has been quite successful. This increase caused economic growth and job opportunities, which was accompanied by population growth, with many migrants from other areas seeking employment. However, this also resulted in an urbanization process that produced both educated and uneducated workers. Since the uneducated work force often suffers from financial instability, this factor is potentially linked to a rise in unemployment, crime, and social problems in Palu.

Investment growth has prompted the expansion of the urban area, and parts of Palu's periphery have become industrial zones. Settlement development has been found as the main cause of physical changes within the Palu region. This is demonstrated by the manifestation of rapid population growth and the emergence of unauthorized settlements on the outer perimeter of the city that are the result of increased demand for housing. However, it can be observed that the Palu urbanization pattern, both spreading and sprawling, did not occur in all directions with the same size and scope. Palu's urban growth has tended to be directed towards Biromaru, with minimal spread towards Donggala. Geographical factors, such as the dominance of hills bordering the sea in the Donggala city area, along with a lack of adequate infrastructure, have restricted development in this area in contrast to the Biromaru area, which tends to be flatter and is situated in a valley that is flanked by two hills. The extended urban growth in Palu illustrates the urbanization process of a medium-sized city in Indonesia, which has replicated the process of much larger cities by forming an urban agglomeration that extends from the city center to the periphery. The prolonged urbanization process may also be interpreted as a sign of a weak growth management system that is supposed to be in charge of managing spatial planning processes. The extended urbanization process also promotes the incorporation of villages near the periphery into urban agglomerations. These phenomena pose significant challenges in managing urbanization processes, particularly when developing management policies that are intended to be more sustainable.

Palu's poor urban planning and ineffective land use regulations have resulted in the rise of low-cost housing in areas devoid of or with limited access to public services. Palu's government must have careful planning and control over the physical development of the city, buildings, and land use before illegal housing and marginalized areas appear and become unmanageable. The government should also promote information about safe residential areas since there is currently a lack of recommendations on whether or not dwellings are safe to live in. As a result, Palu, as a medium-sized city, should be

managed with caution and diligence in order to avoid the problems that have arisen in large cities.

Decentralization has resulted in Palu's regional expansion and progress in infrastructure development, human resources development, and overall economic development over the past 20 years. Despite these economic advances however, there are still considerable shortcomings when evaluating the general level of wellbeing among Palu's citizens since social welfare did not rise equivalently with the city's economic growth. This is primarily due to the private sector becoming more involved in regional development in light of an absence of government funding and oversight. Even though poverty has decreased, the poverty disparity has remained high. This is also the result of longstanding inequalities, such as unequal access to education, health, and the economy. Therefore, Palu was able to develop economically but only a small portion of the population has benefited from this since community welfare did not improve significantly.

The natural disasters that took place in Palu on September 28th in 2018 have had a severely negative impact on the city's economy, development, and were traumatic for the local residents. Temporary economic collapse significantly increased societal stress levels. In this regard, the government was expected to provide assistance, not only in the form of material objects and food, but also psychological support as well as disclosing information to disaster victims. Economic factors largely determined Palu's disaster response capacity. Human development, such as improved education and health care, may reduce the number of people lost. Well-developed areas, such as housing settlements that were built by *Ciputra Group* for the upper middle class, suffered no significant damage when the natural disaster occurred, even those that were built right on the beach. This was due to the housing complex's technical engineering for disaster mitigation and its low liquefaction potential. Contrastingly, much of the fishermen's housing was swept away by the tsunami and low-cost housing in Petobo and Jono Oge areas was severely damaged during liquefaction and resulted in a high number of victims.

It is well known that severe natural disasters have large impacts on affected communities. The impact is often much greater on those who are more vulnerable and the case of Palu was no exception to this rule. Many people who lost their jobs did not have emergency savings that could be used to meet daily needs or as initial capital to rebuild their destroyed businesses. Many survivors have been forced to return to coastal areas where human activity and habitation are prohibited due to the economy's slow recovery process. They are returning to a new risk situation as a result of this tragedy. This was partly due to poverty and a lack of knowledge about an effective disaster response. To ensure the existence of human security, a community requires education, guidance, and financial assistance before a natural disaster strikes. Further a mitigation plan to limit such damage must be prepared and carried out. Essentially, precautionary measures such as earthquake-resistant buildings, effective and immediate evacuation plans, and careful urban planning are necessary in order to decrease risk and vulnerability. While natural disasters cannot be predicted or prevented, the economic impact of these disasters can be mitigated or minimized. This study's findings clearly show that there is a significant and meaningful relationship between economic conditions and the economic impact of natural disasters. The size and capacity of the government in dealing with disaster was also discovered to be significant and inversely related, which improved understanding of government intervention on minimizing the economic impact of natural disasters.

In any case, the development of Palu contains potential lessons for other intermediate cities or growing smaller cities, particularly those that are expected to become metropolitan regions in the future. Hence, the types of drivers mentioned would also be present in other cases, particularly in cities where development is mainly triggered by their functions as hubs for many economic activities. Palu's urban development was driven by internal and external forces and, because growth is relatively large and population-driven, urban expansion is still manageable. Local institutional capacity, on the other hand, which is critical in dealing with extended urbanization, is relatively low.

Furthermore, the governments need to pay careful attention to avoid the infrastructure and service gaps that can become increasingly overwhelming. Thus, in order to control extended urbanization, a collaboration between neighboring municipalities is important. This collaboration will also be economically beneficial because the stronger the links are between local governments, the more economies of scale in service provision and the more focus on regional rather than jurisdictional growth can be expected (ERICKCEK, 2006). Moreover, the disaster in Palu contributes knowledge and insight into why it is critical for other medium-sized cities to focuses on resilience and prepare for their inhabitants' ability to secure primary functions and structures before, during, and after a natural disaster. Since mistakes in managing development and urban growth are difficult to reverse, it is all the more relevant to link urban planning with effective disaster mitigation.

The empirical results reported here should be considered in light of several limitations. Data on study locations was difficult to obtain during the era of centralization because information was limited by the central government, particularly on sensitive and critical issues (such as those related to economics and political policies); additionally, Palu was a small city located in the Indonesian archipelago, with relatively few researchers interested in conducting research there. Furthermore, the government's data has not been computerized, so much information is inaccessible or unavailable. In order to compensate for this, the author conducted interviews with government officials, academics, and long-term Palu residents. Furthermore, data from investors was difficult to obtain in the age of decentralization and many businesses were hesitant to provide information about their relationships with the government (both with the local and central government).

Another limitation was that many respondents who communicated during the first filed trip died, disappeared, or chose not to return to Palu because they were affected by the natural disaster in 2018. As a result, the author was forced to restart the interview process with new respondents. Conducting interviews with disaster victims was also challenging because many were still traumatized by the recent disaster and talking about

this event triggered their negative memories. Furthermore, many disaster survivors were skeptical of the large number of media representatives who came to conduct interviews without contributing to improving their current situation. Thus, the writer needed more time to mingle with the disaster survivors in order to establish a good relationship and trust so that they would be willing to provide information for the study. As a result, if a similar study is conducted using the snowball method in interviews, more samples should be prepared to avoid unexpected events such as what the author experienced. In order to obtain accurate information from both parties, the number of informants from the government and the community must be balanced.

Based on these findings, academics and policymakers should remain concerned that urbanization is a natural and inevitable process, along with the social and economic development of the nation. The new regional autonomy and fiscal decentralization legislation passed by the Indonesian parliament in 1999 had a significant impact on urban development and transformation in Palu as medium-sized city. Regional autonomy entails not only transferring funds and authority from the central government to the local government, but also establishing and maintaining local governments. Local governments have started to implement a participatory urban development action plan in which stakeholders are considered as equal partners in decision making (though they are still in the 'learning by doing' phase, searching for an appropriate method for such a democratic system). However, this approach is currently designed to solve immediate problems at the small-scale or communal level, with little regard for city resilience and long-term urban development. To guide communities and local governments, technical assistance for urban community development is urgently needed. The management of urban development should be viewed as the responsibility of not only the government, but also of the private sector and urban communities, because the government does not have enough resources to meet the demands for urban development. As a result, there is a need to establish good governance for urban development that involves all actors,

particularly local government, private sectors, and communities, in the spirit of equal partnerships, with no one subordinated to another.

Based on the limitations of the political process, lack of planning, inadequate medium-sized city governance, and limitations in the current risk assessment reported by Triyanti (2022), future research and policy should be oriented toward reviewing the government structure in Indonesia, as well as the governance of medium-sized cities. studies may also suggest alternative strategies for improving disaster governance. More research is needed to inform disaster risk from the standpoint of a systemic risk framework and inter-agency coordination in order to ensure a systematic and coherent approach.

The 2018 natural disaster in Palu has taught us that we should think about disaster risk from a systemic risk framework perspective and that there needs to be more interagency coordination in order to guarantee a systemic and coherent approach. Accordingly, the governance structures in Indonesia and Palu need to change in order to minimize the death toll and damages in future natural disaster events.

References

- Amy Victoria & Stephenson (2010). Benchmarking the Resilience of Organisations. Doctoral Thesis.
- Adger WN. Social and ecological resilience: are they related? Progress in Human Geography. 2000;24(3):347-364. doi:10.1191/030913200701540465
- Adisubrata. (2013). Dari Persbreidel Ordonantie Tahun 1931 Hingga Kemerdekaan Pers Dalam Era Reformasi. *Jurnal of Dewan Pers*, 11-18.
- Adriyan. (2013). Strategi Penghidupan Ekonomi Rumahtangga Pada Sektor Pertanian Pascaerupsi(Studi Kasus Erupsi Gunungapi Bromo Tahun 2010). Tesis: Magister Manajemen Bencana Universitas Gadjah Mada Yoqyakarta.
- Adyatama. (2018). *Analisis Struktur Ekonomi dan Sektor Basis di Kota Palu Tahun 2012-2016*. Yogyakarta: Universitas Islam Indonesia.
- Agustina, E. (2009). Mencermati Fenomena Dibalik Kerusuhan Poso (Analisis Menurut Teori Anom Robert). *Jurnal Hukum Supremasi*, 385-397.
- Ahmed, Rashid., Mohamed Seedat., Ashley van Niekerk., Samed Bulbulia. (2004). Discerning community resilience in disadvantaged communities in the context of violence and injury prevention. *South African Journal of Psychology*, 386-408.
- Aldrich DP, Meyer MA. Social Capital and Community Resilience. American Behavioral Scientist. 2015;59(2):254-269. doi:10.1177/0002764214550299
- Alesch, D. J. (2001). When small business and not-for-profit organizations colide with environtmental disaster. *Paper presented at The First Annual IIASA-DPRI Meeting Integrated Disaster Risk Management:Reducing Socio-Economic Vulnerability*. Laxenburg, Austria: IIASA.
- Alganih. (2016). Konflik Poso (Kajian Historis Tahun 1998-2001). *Journal Criksetra Volume* 5, No 10, 168-174.
- Aligica, Paul & Tarko, Vlad. (2014). Institutional Resilience and Economic Systems: Lessons from Elinor Ostrom's Work. Comparative Economic Studies. 56. 10.1057/ces.2013.29.
- Alim Saputra, R. I. (2019). Urban Sprawl In Palu City. *Tadulako Science and Technology Journal Vol. 1 No.1*, 12-25.

- Alisha, M. K. (2020). Identifikasi Kerusakan Bangunan Pasca Gempa Bumi MenggunakanCitra Satelit Worldview-2. *Jurnal Pengembangan Kota Volume 8*, 67-77.
- Alliance.(2018). Emergency asisstance for people affected by earthquake and tsunami.

 Retrieved from http://www.actalliance.org/:
 https://reliefweb.int/report/indonesia/act-alliance-appeal-emergency-assistance-people-affected-earthquake-and-tsunami
- Alliance, (2007). Urban resilience: Research prospectus a resilience alliance for transmitting urban system towards sustainable futures. Stockholm: Stockholm University, Sweden.
- Amar Ali. (2011). Model penggunaan lahan untuk bangunan berdasarkan ketersediaan lahan dan kapasitas, studi kasus: Kota Palu. Makassar: Universitas Hasanudin.
- Amar, M. S. (2012). Land Availability Analysis for Building Based on Palu City Land Characteristic. *International Journal of Civil & Environmental Engineering IJCEE-IJENS Vol: 12 No: 01*.
- Anderies, J. J. (2004). A framework to analyze the robustness of social-ecological systems from an institutional perspective. *Ecology and Society*, *9*(1), 9-18.
- Annez, Patricia Clarke; Linn, Johannes F.. 2010. An Agenda for Research on Urbanization in Developing Countries: A Summary of Findings from a Scoping Exercise. Policy Research working paper; no. WPS 5476. World Bank. © World Bank. https://openknowledge.worldbank.org/handle/10986/3958 License: CC BY 3.0 IGO."
- Anriani, Haslinda. (2018). Integration and Harmonization Strategy in Multicultural Society at Palu City. Jurnal Ilmu Sosial dan Ilmu Politik. 21. 246. 10.22146/jsp.27391.
- Aragon, L. V. (2001). Communal Violence in Poso, Central Sulawesi: Where People Eat Fish and Fish Eat People. *Cornell University Southeast Asia Program*, 45-80.
- Arianna Morelli, Andrea Taramelli, Fabio Bozzeda, Emiliana Valentini, Marina Antonia Colangelo, Yandy Rodríguez Cueto. (2021) The disaster resilience assessment of coastal areas: A method for improving the stakeholders' participation, Ocean & Coastal Management, Volume 214.
- Arndt. (1983). Transmigration: Achievements, Problems, Prospect, Bulletin of Indonesian Economic Studies.

- Arsyad, L. (2018). Economic development. STIM YKPN, Yogyakarta.
- Arup International Development. (2015). *City Resilience Framework-The Rockefeller Foundation*, Retrieved from https://www.rockefellerfoundation.org/report/city-resilience framework/%5Cnhttp://publications.arup.com/publications/c/city_resilience_in dex.
- Asadzadeh, Asad: Conceptualizing the concept of disaster resilience: a hybrid approach in the context of earthquake hazard: case study of Tehran City, Iran. Bonn, 2017. Dissertation, Rheinische Friedrich-Wilhelms-Universität Bonn. Online-Ausgabe in bonndoc: https://nbn-resolving.org/urn:nbn:de:hbz:5n-47466
- Asian Development Bank. (2019). *Emergency Assistance for Rehabilitation and Reconstruction Palu Coastal Protection*. ADB.
- Astutiek. (2000). *Tingkat Pertumbuhan Pemukim di Daerah Aliran Sungai ditinjau dari segi sosial budaya masyarakatnya.* Palu: Majalah Ilmiah Mektek, Fakultas Teknik Universitas Tadulako.
- Aswicahyono, H. (2015). *The disscussion Paper Series: Is Indonesia Trapped in the middle.* Freiburg: University of freiburg.
- Austrian Institute for Regional Studies and Spatial. (2006). *The Role of Small and Medium-Sized Towns (SMESTO) Final Report.* Vienna: ESPON.
- Awaludin. (2009). Perdamaian Ala JK. Posos Tenang, Ambon Damai. Jakarta: Grasindo.
- Badan Geologi. (2018). *DI BALIK PESONA PALU, ISBN: 978-602-9105-76-6.* Jakarta: Kementrian ESDM & Sumber Daya Mineral.
- Badan Pusat Statistik Kota Palu. (2002). *PDRB Menurut Lapangan Usaha Kota Palu*. Palu: BPS Kota Palu.
- Badan Pusat Statistik Kota Palu. (2010). Kota Palu dalam angka. Palu: BPS Palu.
- Badan Pusat Statistik Kota Palu. (2011). Kota Palu Dalam Angka. Palu: BPS kota Palu.
- Bahadur, Aditya. (2010). The Resilience Renaissance? Unpacking of Resilience for Tackling Climate Change and Disasters, Brighton: IDS SCR Working Paper.

- Balai wilayah Sungai Kota Palu. (2018). *Rainfall data from 2002 to 2017.* Balai wilayah sungai.
- Bank Indonesia Sulteng. (2014, September 8). *Kajian Ekonomi Regional Sulteng*. Palu:

 Bank Indonesia Sulteng. Retrieved from

 https://sultengraya.com/read/464/triwulan-ii-pertumbuhan-ekonomi-sultengturun/
- Bank, W. (1988). *Indonesia: The Transmigration Program in Perspective.* Washington DC: World Bank.
- Bao, H., Ampuero, JP., Meng, L. *et al.* Early and persistent supershear rupture of the 2018 magnitude 7.5 Palu earthquake. *Nat. Geosci.* **12**, 200–205 (2019). https://doi.org/10.1038/s41561-018-0297-z
- BAPPEDA. (2020). RKPD kota Palu. Palu: Badan Pembangunan Daerah Kota Palu.
- Bardhan, P. (2002). Decentralization of governance and development. *The Journal of Economic Perspectives*, pp. 185-205.
- Bellet, C. a. (2003). Ciudades Intermedias. Perfiles y Pautas. Lleida: Milenio.
- Benson, C. (2004). Working in Partnership to Build Safer Communities and Reduce the Impacts of Disasters in Developing Countries. Solidarity and Opportunity: The Potential of Insurance for Disaster Risk Management in Developing Countries. *Conference proceedings and workshop report.* Zurich, Switzerland.
- Birkmann, J., Welle, T., Solecki, W. *et al.* Boost resilience of small and mid-sized cities. *Nature* **537**, 605–608 (2016). https://doi.org/10.1038/537605a
- Birkmann, J. (2007). Risk and vulnerability indicators at different scales: applicability, usefulness and policy implications. *Environmental Hazards*, 7(1), 20-31.
- BNPB. (2020). *Rencana NasionalPenanggulanganBencana 2020-2024.* Jakarta: Badan Nasional Penanggulangan Bencana.
- Bolay, Jean. (2020). Urban Planning Against Poverty; Future City 14. Springer Open.
- Bolay, Jean-Claude & Rabinovich, Adriana. (2004). Intermediate cities in Latin America risk and opportunities of coherent urban development. Cities. 21. 407-421. 10.1016/j.cities.2004.07.007.

- Bolay, Jean-Claude; Rabinovich Behrend, Adriana (2003). Villes intermédiaires en Amérique latine. Risques et potentiels pour un développement urbain cohérent. Montréal, Trames. Université de Montréal.
- Bolin, R., 1993. Household and Community Recovery After Earthquakes, Institute of Behavioral Science, University of Colorado, Boulder, CO.
- BPS. (2014). *Produk domestik regional Bruto Kota Palu menurut Lapangan Usaha.* Palu: BPS Kota Palu.
- BPS. (2014). *Produk domestik regional Bruto Kota Palu menurut Lapangan Usaha.* Palu: BPS Kota Palu.
- BPS. (2016). Potensi Ekonomi Kota Palu. Palu: BPS Kota Palu.
- BPS. (2017). Sensus Ekonomi 2016 Analisis hasil Listing —Potensi Ekonomi Indonesia. Jakarta: BPS. Jakarta: BPS.
- BPS. (2019). Indikator Ekonomi Kota Palu 2019. Palu: BPS Kota Palu.
- BPS. (2019). Persentase Status Kepemilikan Rumah di Kota Palu Tahun 2018-2019. Palu: BPS Kota Palu.
- BPS. (2019). Statistik Kesejahtraan Rakyat Kota Palu. Palu: BPS Kota Palu.
- BPS. (2021). Kota Palu Dalam Angka. Palu: Badan Pusat Statistik Kota Palu.
- Brata, A. G. (2005). Human Development And Regional Economic Performance In Indonesia. *Journal of Development Economics Economic Studies of Developing Countries JEP Vol. 7 No.2*, 113-122.
- Brigitte, Adam (2006). Medium-sized cities in urban regions, European Planning Studies, 14:4, 547-555, DOI: 10.1080/09654310500421220
- Britannica. (2008). *Encyclopedia Britannica*. Retrieved from https://www.britannica.com/biography/Suharto
- Britannica. (2010). *The Editors of Encyclopaedia. "Palu". Encyclopedia Britannica*. Retrieved from https://www.britannica.com/place/Palu. Accessed 19 January 2022.
- Brown, A. (2015). Planning for Sustainable and Inclusive Cities in the Global South, DOI: http://dx.doi.org/10.12774/eod_tg.march2015.browna. Evidence on Demand.

- Bruneau, Mitchel & Tierny, Kathleen. (2007). *The 4 R's of resilience and multi-hazard engineering*. Ney York: MCEER.
- Bruneau, M. (2003). A framework to quantitatively assess and enhance the seismic resilience of communities. *Earthquake Spectra*, 19(4), 733-752.
- Buckle, P. (1998). Re-defining Community and Vulnerability in the Context of Emergency Management. *Australian Journal of Emergency Management*, 21-26.
- Budge, Travel & Butt, Andrew. (2009). I'll have my city medium thanks. What do medium sized cities offer an urban planning and policy agenda?
- Burton. (2012). *The development of metrics for community resilience to natural diasaters.* Columbia: University of South Carolina.
- Caldeira, T. P. (2017). Peripheral urbanization: Autoconstruction, transversal logics, and politics in cities of the global south. *Environment and Planning D: Society and Space 35*, 3-20.
- Carlson, H. R. (2012). Resilience: Theory and application. IL: U.S. Department of Energy.
- Carpenter, S. W. (2001). From metaphor to measurement: Resilience of what to what? *Ecosystems*, 4(8), 765-781.
- Castleden, M. M. (2011). Resilience thinking in health protection. *Journal of public health* (Oxford, England), 369-77.
- Cernea, M. (1995). Social Integration and Population Displacement the contribution of Social Science, 991-112.
- Chandra, A. J.-P. (2011). Building community resilience to disasters: A way forward to enhance national health security (techincal report). Rand Health Q.
- Chelleri L, W. J. (2015). Resilience trade-offs: addressing multiple scales and temporal aspects of urban resilience. *Environment and Urbanization*, 181-198.
- Chenery H, B. (1979). *Structural change and development policy.* New York: Oxford University Press.
- Chong, N. O. (2018). Framework Considerations for Community Resilient Towards Disaster in Malaysia. *Procedia Engineering, 212, https://doi.org/10.1016/j.proeng.2018.01.022,* 165–172.

- Clifton, J. (2016). *Northern schools: Putting education at the heart of the northern powerhouse, IPPR North.* http://www.ippr.org/publications/northern-schools-putting-education-at-the-heart-of-the-northern-powerhouse.
- Cohen, Barney. (2006). Urbanization in Developing Countries: Current Trends, Future Projections, and Key Challenges for Sustainability. Technology in Society. 28. 63-80. 10.1016/j.techsoc.2005.10.005. Cohen, Odeya & Lahad, Mooli & Goldberg, Avishay & Aharonson-Daniel, Limor & Leykin, Dmitry. (2013). The conjoint community resiliency assessment measure as a baseline for profiling and predicting community resilience for emergencies. Technological Forecasting and Social Change. 80. 10.1016/j.techfore.2012.12.009.
- Coles, E. and Buckle, P. (2004) Developing Community Resilience as a Foundation for Effective Disaster Recovery. Australian Journal of Emergency Management, 19, 6-15.
- Committee on Increasing National Resilience to Hazards and Disasters, C. o. (2012). Disaster resilience: A national imperative. Washington DC: National Academy of Sciences.
- Cox, R. S., & Hamlen, M. (2014). Community Disaster Resilience and the Rural Resilience Index. American Behavioral Scientist, 59(2), 220–237. https://doi.org/10.1177/0002764214550297
- Cross, J. (2001). 1). Megacities and small towns: Different perspectives on hazard vulnerability. *Global Environmental Change*, 63-80.
- Crouch, S. M. (2006). The proselytisation Case: Law, the Rise of Islamic Conservation and Religious Discrimination in West Java. *Austl. J.Asian L 322*.
- Cutter. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, *18*(4), 598-606.
- Cutter. (2016). The landscape of disaster resilience indicators in the USA. *Nat Hazards 80*, 741–758.
- Cutter, S. B. (2010). Disaster resilience indicators for benchmarking baseline conditions disaster resilience indicators for benchmarking baselineconditions. *Journal of Homeland Security and Emergency Management*, 1-22.

- Damm, Muhammad. (2018). The (Trans)formation of Religious Capital in Indonesian Politics During New Order Era: A Case Study Of Nahdlatul Ulama. Journal of Indonesian Social Sciences and Humanities. 8. 144-158. 10.14203/jissh.v8i2.96.
- Daniel, Vanessa & Florax, Raymond & Rietveld, Piet. (2009). Flooding Risk and Housing Values: An Economic Assessment of Environmental Hazard. Ecological Economics. 69. 355-365. 10.1016/j.ecolecon.2009.08.018.
- Darmawan, R. E. (2008). The practices of decentralization in Indonesia and its implication on local competitiveness. Enschede, Netherland: Public Administration-Public Governance study School of Management and Government, University of Twente.
- Daryono. (2011). *Tataan TektonikdanSejarah Kegempaan Palu, Sulawesi Tengah.* Badan Meteorologi Klimatologi dan Geofisika.
- Daryono. (2021). *Mitigasi Gempa Bumi dan Tsunami Badan Meteorologi Klimatologi dan Geofisika (BMKG)*. Retrieved from www.kompas.com.
- David, S. (2008). Urban Environments: Issues on the Peri-Urban Fringe. *The Annual Review of Environment and Resources Vol 33,* 10.1146/annurev.environ.33.021407.093240.
- Davies, T. R. (2018). Increasing communities' resilience to disasters: An impact-based approach. International Journal of Disaster Risk Reduction, 31(6), 742–749. https://doi.org/10.1016/j.ijdrr.2018.07.026.
- Davis, M. (2004). Planet of Slums. New Left Review. Retrieved September 4, 2021, from https://newleftreview.org/issues/ii26/articles/mike-davis-planet-of-slums.
- Dawes, C. A. (2004). Learning from crisis: Lessons in human and information infrastructure from the world trade center response. *Social Science Computer Review*, 52-66.
- Desousa, Avinash & Shrivastava, Amresh. (2017). Resilience among people who face natural disaster. Journal of Psychiatrists' Association of Nepal. 4. 1. 10.3126/jpan.v4i1.16735.
- De Sherbinin A, Schiller A, Pulsipher A. The vulnerability of global cities to climate hazards. Environment & Urbanization. 2007;19 (1): 39-64.doi:10.1177/0956247807076725
- De Vaus. (2002). Surveys in Social Research. Retrieved July 3, 2019, from http://lst-iiep.iiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in]/?t2000=003850/(10010.4135/9781446263495.

- Denis, C. S. (2010). DISASTER RISK PREPAREDNESS The Role of Risk Governance, Multi-Institutional Arrangements and Polycentric Frameworks for a Resilient Tsunami Early Warning System in Indonesia. Bonn.
- Dewan Nasional KEK Republik Indonesia. (2017, November 11). Retrieved from http://kek.go.id/berita/2017/08/KEKPaluResmiBeroperasi145
- Dharmawan, R. F. (2017). Geovisualization Using Hexagonal Tessellation for Spatio temporal Earthquake Data Analysis in Indonesia. *Springer Singapore*.
- Dijkstra, N. F. (2018). Applying the Degree of Urbanisation to the Globe: A New Harmonised Definition Reveals A Different Picture of Global Urbanisation. 16thConference of IAOSOECD Headquarters. Paris, France.
- Dinas Kesehatan Kota Palu. (2017). *Profil Kesehatan Provinsi Sulawesi Tengah.* Palu: Pemerintah Provinsi Sulawesi Tengah, Dinas Kesehatan.
- Diprose, U. (2008). Decentralisation and Conflict Management in Indonesia and Nigeria. CRISE WORKING PAPER No. 49.
- Dodman, D. E. (2009). *State of the World into a Warning World.* The World Watch Institute.
- Dwipayana. (1989). *Otobiografi Soeharto: pikiran, ucapan, dan tindakan saya.* Jakarta: Citra Lamtoro Gung Persada.
- Edensor, J. M. (2012). Introduction: urban theory beyond the West. In: Tim E, Mark J (eds)Urban theory beyond the West. A world of cities. London/New York: Routledge.
- Eduardo Rodriguez-Oreggia, A. d. (2010). The Impact of Natural Disasters on Human Development and Poverty at the Municipal Level in Mexico. *CID Working Paper No. 43*, 1-35.
- Erickcek, G. A. (2006). Small cities blues:" looking for growth factors in small and medium sized city. *Economic development quarterly*, 232-258.
- Escudero Gómez, L., García González, J., & Martínez Navarro. (2019). Medium-sized Cities in Spain and Their Urban Areas within National Network. *Urban Science*, 3(1), 5. *MDPI AG. Retrieved from http://dx.doi.org/10.3390/urbansci3010005*.

- Faisal, A. (2019). Dinamika Sosial Ekonomi Etnis Tionghoa Dengan Jawa di Kecamatan Welahan Dari Masa Orde Baru Sampai Dengan Reformas. Semarang: Universitas Negri Semarang.
- Fang, D. Y. (2017). Urban agglomeration: An evolving concept of an emerging phenomenon. Landscape and Urban Planning, https://doi.org/10.1016/j.landurbplan.2017.02.014., 126-136.
- FAO. (2021). FAO helps Indonesian farmers and fishers recover after an earthquake and tsunami. Retrieved from http://www.fao.org/asiapacific/news/detailevents/en/c/1162540/
- Fareza, M. (2016). DAMPAK KEBIJAKAN PEREKONOMIAN ERA ORDE BARU TERHADAP PEMBANGUNAN DI INDONESIA. UNIVERSITAS PGRI YOGYAKARTA.
- Fatmawati. (2000). Otonomi Daerah dalam UU Nomor 22 Tahun 1999 dan UU Nomor 5 Tahun 1974, *Jurnal Hukum & Pembangunan*.
- Fearnside, P. (1997). Transmigration in Indonesia: Lessons from Its Environmental and Social Impacts. *Environmental Management*, 553-570.
- Field, C. B. (2012). Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change. . Cambridge, UK, and New York, NY, USA: Cambridge University Press.
- Field, J. (2014). Modal Sosial. Bantul: Kreasi wacana.
- Firman. (1991). Pengembangan kota-kota menengah dalam pembangunan jangka panjang nomor 2. *Perencanaan wilayah dan kota*, 8-11.
- Firman. (2004). New Town Development in Jakarta Metropolitan Region: A Perspective of. *Habitat International 28*, 349-368.
- Firman. (2016). The Patterns Of Indonesia's Urbanization 1980-2007. *Jurnal Sekolah Arsitektur,Perencanaan dan Pengembangan Kebijakan,Institut Teknologi Bandung*.
- Fitri, S. (2021). *Etos kerja pedagang etnis tionghoa di Pasar Wage Purwokerto*. Purwokerto: IAIN Purwokerto.

- Flatt & Sotomayor. (2017). At a Turning Point: A New Era for Mid-Sized Cities. In M. o. Evergreen, Leveraging Ontario's Urban Potential: Mid-Sized Cities Research Series (pp. 5-11). Ontario: Evergreen.
- Folke, C. C. (2003). Synthesis: Building resilience and adaptive capacity in social-eclogical systems. *Navigating Social–Ecological Systems*, 352-387.
- Fothergill, A. &. (2004). Poverty and disasters in the United States: A review of recent sociological findings. *Natural Hazards*, 89-110.
- Fulton, P. S. (2002). Rochester Conversation on Mid-Size Cities, The Mid-size City: Exploring Its Unique Place in Urban Policy Unique Place in Urban Policy. New york: City of Rochester.
- Gaffar. (2007). Otonomi Daerah Dalam Negara Kesatuan. Yogyakarta: Pustaka Pelajar.
- Ganor, M., & Ben-Lavy, Y. (2003). Community Resilience: Lessons Derived from Gilo Under Fire. Journal of Jewish communal service, 79.
- Gencer, Ebru & Folorunsho, Regina & Linkin, Megan & Wang, Xiaoming & Natenzon, Claudia & (Gorakphur, Shiraz & Mani, Nivedita & (Washington, Maricarmen & Peshawar, Somayya & (Washington, Hori & Castro-Díaz, Ricardo & Leone, Mattia & (Melbourne, Brenda & York, Dilnoor & Panda, Abhilash. (2015). CHAPTER 3: DISASTER AND RISK. Climate Change and Cities Second Assessment Report of the Urban Climate Change Research Network. ARC3.2 Summary for City Leaders. Urban Climate Change Research Network. Columbia University. New York..
- Gilbert, S. (2010). Disaster Resilience: A Guide to the Literature, U.S. Department of Commerce, National Institute of Standards and Technology,. *NIST Special Publication 1117*.
- GIZ. (2020). *Making medium-sized cities more sustainable and climate-friendly.* Deutsche Gesellschaft für Internationale Zusammenarbeit.
- Global Administrative Areas (2018). GADM Data Palu [digital geospatial data]. University of California, Berkeley. Retrieved from https://www.gadm.org
- Godschalk, B. T. (1999). *Natural hazard mitigation: Recasting disaster policy and planning.*Washington DC: sland Press.
- Greene, M. (1992). Housing recovery and reconstruction: Lessons from recent urban earthquakes. *In Proceedings of the 3rd U.S./Japan Workshop on Urban*

- Earthquakes. Oakland, CA: Earthquake Engineering Research Institute (EERI) Publication No. 93-B.
- Hadikomoro, S. (1999). *Tragedi Trisakti 12 Mei 1998.* Jakarta: Usakti.
- Hadimaja, D. &. (1989). *Soeharto, Pikiran, Ucapan dan Tindakan Saya.* Jakarta: Citra Lamtoro Gung Persada.
- Haliadi, G. &. (2019). Structure of Informal Economy History of Palu City in Early 2000. Advances in Social Science, Education and Humanities Research, volume 421,4th International Conference on Arts Language and Culture (ICALC 2019) (pp. 556-563). Atlantis Press.
- Hall, R., & Wilson, M.E. (2000). Neogene sutures in eastern Indonesia. Journal of Asian Earth Sciences, 18, 781-808.
- Hallegatte, S. (2012). An exploration of the link between development, economic growth, and natural risk. Policy research working paper 6216. Washington, DC: World Bank.
- Hamilton. (1979). *Tectonics of the Indonesian Region. Report 1078. Professional Paper.*USGS Publications Warehouse.
- Hannah, (2018, October 4). Indonesia tsunami: Crisis worsen as aid struggle to reach island. Retrieved from https://www.theguardian.com/world/2018/oct/04/indonesia-tsunami-crisis-worsens-as-aid-struggles-to-reach-island
- Hannemann. (2018). Kleine Stadt, was nun. In B. K.-C. Reimann, *Vielfalt Gestalten. Integration und Stadtentwicklung in Klein- und Mittelstädten; EditionDifu—Stadt, Forschung, Praxis, 17* (pp. 45-62).
- Harahap, F. (2013). Dampak Urbanisasi Terhadap perkembangan Kota di Indonesia. *Jurnal Society, Vol. I, No.1*, 35-45.
- Haryati. (2013). Materi Sosialisasi Peraturan Daerah Nmor 3 Tahun 3010 tentang Penanggulangan Bencana di Provinsi Jawa Timur, diselenggarakan oleh DPRD Provinsi Jawa Timur. Surabaya.

- HCT Indonesia, (2021, 24 April). Retrieved from https://reliefweb.int/report/indonesia/central-sulawesi-earthquake-response-plan-oct-2018-dec-2018
- Hildreth. (2007). Understanding medium-sized cities. *Town and Country Planning*, 163-167.
- Hill. (2011). urnalisme dan Politik di Indonesia. Jakarta: Pustaka obor Indonesia.
- Holling, C. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 4(2), 1-23.
- HSAC, S. (2010). Community Resilience Task Force Recommendations.
- Hudayah, N. (2014). Kebijakan pemerintah Indonesia terhadap Etnis Tionghoa di bidang Politik, Sosial, Budaya dan Ekonomi di Kabupaten Jember dari zaman Orde Baru sampai zaman reformasi 1998-2012. *Publika Budaya*, 19-31.
- Hussain, Y. (2020). Chapter 11 community disaster recovery. Community Development.
- Ibidun Adelekan, C. J. (2015). Disaster risk and its reduction: an agenda for urban Africa.

 International Development Planning Review,

 DOI:https://doi.org/10.3828/idpr.2015.4, 33-43.
- IIPC. (2007). Fourth Assessment Report Climate Change. Climate Change Impacts, Adaptation and Vulnerability.
- Indonesia National Development Planning Agency. (2019). *Project for Development of Regional Disaster Risk Resilience Plan in Central Sulawesi in the Republic of Indonesia*. BAPPENAS.
- Iqbal, Kazi, and Meherun Ahmed. "Are Decentralised Governments More Effective in Mitigating Disaster Risks?" *The Bangladesh Development Studies*, vol. 38, no. 3, 2015, pp. 1–24. *JSTOR*, https://www.jstor.org/stable/26538810. Accessed 12 Sep. 2022.
- Irshandi, M. (2019, December 17). Kawasan ekonomi khusus Palu. Retrieved from https://www.antaranews.com/berita/1212851/bumn-china-investasi-rp120-triliun-di-kawasan-ekonomi-khusus-palu
- ISDR. (2009). ISDR Terminology on Disaster Risk Reduction: United Nations, International Strategy for Disaster Reduction.

- ISET. (2011). Catalyzing Urban Climate Resilience: Applying resilience concepts to planning practice in the ACCCRN Program (2009-2011). Retrieved from Retrieved from Boulder: http://i-s-e-t.org/resources/major-program-reports/catalyzing-urban-climate-resilience.htm.
- Ismail. (2014). Pemilihan Kepala Daerah Secara Langsung Sebagai Momentum Strategies dalam Pengembangan Otonomi Daerah dan Demokrasi Lokal. *Jurnal Valid Vol 11 no 2*, 57-72.
- Ismail, F. (2012). Republik Bhineka Tunggal Ika; Mengurai Isu-isu Konflik, Multikulturalisme, Agama, dan Sosial Budaya. Jakarta: Badan Litbang dan Diklat Kementerian Agama Repiblik Indonesia.
- Istianto, H. &. (2019). Optimization of Irrigation Operation During Emergency Situation Post earthquake Event In Gumbasa Irrigation System, Sigi, Central Sulawesi. *Jurnal Irigasi Vol.14 No 2*, 103-112.
- Jayne, M. (2010). The Cultural Economy of Small Cities. *Geography Compass, vol,* 1408-1416.
- Jedwab, I. C. (2017). Demography, urbanization and development: Rural push, urban pull and urban push?. *Journal of Urban Economics*, 6-16.
- Jeni Palindangan & Abu Bakar. (2021). Analisis pengaruh tingkat pertumbuhan ekonomi dan index pembangunan manusia terhadap tingkat pengangguran di Kabupaten Mimika. *Jurnal Kritis vol 5*.
- Joakim, E. (2012). Reducing Vulnerability and Building Resilience in the Post-Disaster Context: A Case Study of the 2006 Yogyakarta Earthquake Recovery Effort. Sains dan Teknologi Lingkungan, 01-14.
- Joakim, E. (2012). Reducing Vulnerability and Building Resilience in the Post-Disaster Context: A Case Study of the 2006 Yogyakarta Earthquake Recovery Effort. JurnalSainsdanTeknologiLingkungan, 1-14.
- Johnson, A. G. (2006). *Privilege, power, and difference (2nd ed.).* New York: NY: Mc Graw-Hill.
- Karmela, s. H. (2017). Kehidupan sosial orang tionghoa di kota Jambi. DIKDAYA, 55-62.
- Karnavian. (2008). *Indonesian Top Secret; Membongkar Konflik Poso.* Jakarta: Gramedia Pustaka Utama.

- Katherina, L. K. (2017). DINAMIKA PERTUMBUHAN PENDUDUK DAN KEJADIAN BANJIR DI KOTA: KASUS SURABAYA. *JURNAL KEPENDUDUKAN INDONESIA*, 131-144.
- Katsuichiro, N. M. (2019). Cascading Geological Hazards and Risks of the 2018 Sulawesi Indonesia Earthquake and Sensitivity Analysis of Tsunami Inundation Simulations. *Front. Earth Sci*, 1-16.
- Kaufmann, David & Meili, Rahel. (2018). Leaves in the wind? Local policies of small and medium-sized towns in metropolitan regions. European Planning Studies. 27. 10.1080/09654313.2018.1535576.
- Kelle, U. a. (1999). Vom Einzelfall zum Typus. Leske + Budrich, Opladen.
- Kemendagri, D. (2021). Visualisasi Data Kependudukan. Jakarta: Kementrian Dalam Negri.
- Kennedy, R. M. (2013). Disaster mitigation: initial response. Southern medical journal.
- Khairil. (2017). The Transformation of The Symbolic Meaning of Radicalism in Acts of Terrorism Post-Conflict in Posos Central Sulawesi. *International Conference on Democracy, Accountability and Governance (ICODAG 2017)* (pp. 282-289). Atlantis Press.
- Khairil. (2018). Promotion Strategy by Palu City Government to Pulling Investors Interest in Palu Economic Zone. *Journal ASPIKOM Volume 3 No 4*, 798-811.
- Kioe Sheng, Y. (2011). Urban Challenges in South-East Asia. *Paper presented at 5th Asia-Pacific Urban Forum 22-24 June,*. Bangkok, Thailand.
- Kirmayer, S. M. (2009). Community resilience: Models, metaphors and measures. *International Journal of Indigenous Health*, 62-117.
- Klauss, K. (2010). Medium-Sized Towns, Strategic Planning and Creative Governance. DOI:10.1007/978-90-481-3106-8_2.
- Klein, R. J. (2003). Resilience to natural hazards: How useful is this concept? *Environmental Hazards*, *5*(1), 35-45.
- KOCU, E. M. (2007). Prisoner's dilemma :: Studi tentang rivalitas etnis terhadap perilaku memilih dalam Pilkada Sorong Selatan-Papua Barat . Yogyakarta: Universitas Gadjah Mada.
- Komara, B. &. (2020). Jalan Terjal UMKM dan Pedagang Kecil Bertahan di Tengah Pandemi Covid-19 dan Ancaman Krisis Ekonomi Global. *Jurnal Manajemen Bisnis*, 343-359.

- Kouwenhoven, V. (1993). The Rise of The Public Private Partnership". in Jan Koiman. Modern Governance. London: Sage Publications.
- Kováčová, J. P. (2017). Financing the Disaster Resilient City in the Slovak Republic. *Procedia Engineering*, 301–306.
- KPPOD, (. A. (2003). *Investment competitiveness o fregencies/cities in Indonesia,.* Jakarta, Indonesia: KPPOD,USAID.
- Kustianingrum, D. (2010). Tatanan Spasial Permukiman Tak Terencana Kampung Babakan Ciamis Kota Bandung. *Jurnal Rekayasa © LPPM Itenas.No.4. Vol. XIV Institut Teknologi Nasional*.
- Kusumah. (2018). *Di Balik Pesona Palu Bencana Melanda Geologi Menata.* Bandung: Badan Geologi, Kementrian energi & Sumber Daya Mineral.
- Lampe, I. (2010). Identitas Etnik Dalam Komunikasi Politik. *Journal Ilmu Komunikasi Volume 8 No 3*, 299-313.
- Lapabira, A. H. (2019). Pembangunan tanggul teluk Palu. *Retrieved 28 April 2021 from https://walhisulteng.com/menyoal-konsistensi-arah-revisi-perda-rtrw-provinsi-sulteng/*.
- Larson, A. M. (2008). Decentralization of Natural Resource. *Annual Review of Environment and Resources*, 17-31.
- Lee, J.-W. (1997). Economic growth and human development in the Republic of Korea, 1945-1992. New York: Occasional Paper.
- Lee-Treweek, G. A. (2000). Danger in the field: Ethics and Risk in Social. Routledge.
- Legiani, W. & Lestari, R. (2018). Transmigrasi dan Pembangunan di Indonesia. *Jurnal Hermeneutika*, 25-38.
- Legowo, T. A. (2008). 3 Local Governance in Indonesia's Decentralization Era: Prospect and Challenges. *Asian Development Experience Vol. 2*.
- Levin, S. E. (1998). Resilience in natural and socioeconomic systems. *Environmental and Development Economics*, *3*(2), 222-234.
- Liddle. (1973). Evolution from Above: National Development and Local Leadership in Indonesia. *Journal of Asian Studies, 32,* 287-309.

- Liddle. (1988). Indonesia in 1987, The New Order at the Height of Its Power, 180-191.
- Liddle. (1992). Comparative Politics, Ph.D. Programs in Political Science, City University, 443-462.
- Lindell, M. (2013). Recovery and Reconstruction After Disaster. *In: Bobrowsky P.T. (eds) Encyclopedia of Natural Hazards. Encyclopedia of Earth Sciences Series. Springer, Dordrecht.* https://doi.org/10.1007/978-1-4020-4399-4 285.
- Lindell, M. K. (2003). Community impacts of natural disaster. *Natural Hazards Review*, 176-185.
- Lisa Smirl, Building the Other, Constructing Ourselves: Spatial Dimensions of International Humanitarian Response, *International Political Sociology*, Volume 2, Issue 3, September 2008, Pages 236–253, https://doi.org/10.1111/j.1749-5687.2008.00047.x
- Liu. (2011). Mobile governance and city management in China. *Electronic Government*, 2-12.
- Longlands, E. C. (2016). *The Role of Small and Medium-Sized Towns and Cities in growing the Northern Powerhouse.* Institute for Public Policy Research.
- Longstaff, P. N. (2010). Building Resilient Communities: A Preliminary Framework for Assessment. *Homeland Security Affairs, Volume VI, No. 3*.
- Luhulima. (2006). Hari-hari terpanjang mundurnya presiden Soeharto. Jakarta.
- M. Miharja, J. (2010). Inter Local Government Collaboration in Indonesian Metropolitan Transport Planning. *International Development Planning Review*, 167-189.
- Maguire, B. &. (2008). Assessing a community,s capacity to manage change: A resilience approach to social assessment. Canbera: Bureau of Rural Sciences.
- Mahendra, J. D. (2019, February 04). Pertumbuhan kota tanpa tata kelola yang baik. Retrieved from https://wri-indonesia.org/id/blog/3-permasalahan-yang-timbulakibat-pertumbuhan-kota-tanpa-tata-kelola-yang-baik.
- Mahfud. (2020). Structure of Informal Economy History of Palu City in Early 2000. Advances in Social Science, Education and Humanities Research, volume 421,4th International Conference on Arts Language and Culture (ICALC 2019) (pp. 556-563). Atlantis Press.

- Mahsun. (2017). Permukiman Etnis Tionghoa di Palu. Palu: Tadulako Press.
- Mailendra, F. (2009). Analysis of the Impact of Regional Expansions and Factors Affecting
 Human Development in West Java Province. Unpublished thesis, Faculty of
 Agriculture, Agriculture University of Bogor.
- Manyena. (2009). Disaster Resileince in Development and Humanitarian Interventions, *PhD Thesis.* Newcastle: University of Northumbria.
- Manyena,(2009). DISASTER RESILIENCE INDEVELOPMENT AND HUMANITARIAN INTERVENTIONS.
- MapAction. (2018). The total number of buildings mapped includes damaged and destroyed structures, the majority of which are residential. MapAction.org. 2018. From https://maps.mapaction.org/dataset/indonesia2018-ma042-v1. CC-BY-SA 4.0.
- Marcuse, I. D. (2014). Critical urban theory versus. *International Journal of Urban and Regional Research 38(5)*, 1904-1917.
- Mardiatno, D. M. (2017). Review on tsunami risk reduction in Indonesia based on coastal and settlement typology. *Indonesian Journal of Geography*, , 186–194.
- Mardimin. (2018). Andil Agama dan Politik Dalam Konflik Sosial dan Kerusuhan Masal di Indonesia. *Jurnal Studi Pembangunan Interdisiplin,* 50-87.
- Mardin, R. (2011). Analisis perkembangan fisik kota Palu dengan citra landsat. Ruang.Jurnal Arsitektur.
- Marfai, M. K. (2008). The impact of tidal flooding on a coastal community in Semarang, Indonesia. *Environmentalist 28*, 237–248.
- Maria, J. K. (2011). Analysis of the Effect of Government Expenditure on the Education and Health Sector on Poverty Alleviation Through Human Development in Central Java Province. Semarang: Unpublished thesis, Faculty of Economics and Business, Diponegoro University.
- Martokusumo, W. (2008). Revitalisas, Sebuah Pendekatan Dalam Peremajaan Kawasan. Jurnal Perencanaan Wilayah dan Kota. Vol. 19 No. 3, 57-73.
- Masyrofah. (2013). Arah Perubahan Sistem PemiluDalam Undang-Undang Politik Pasca Reformasi(Usulan Perubahan Sistem Pemilu dalam Undang-Undang Politik Pasca Reformasi). *Journal Cita Hukum*, 163-174.

- Mayunga. (2007). *Understanding and applying the concept of community disaster resilience : A capital-based approach.* Texas: Landscape Architecture.
- Mayunga. (2009). Measuring the measure: A multi-dimensional scale model to measure community disaster resilience in the US Gulf Coast region. Texas: Texas A&M University.
- Mileti, D. S. (1999). *Disasters by design: A reassessment of natural hazards in the United States. Natural Hazards and Disasters ed.* Washington: Joseph Henry Press.
- Millenium Ecosystem Assessment. (2003). *Ecosystems and human well-being: a framework for assessment*. Washington D.C,: Island Press.
- Min Sai, S. (2013). *Chinese Indonesians Reassessed. History, Religion, and Belonging.*Singapore Management University Library.
- Minasny, D. F. (2012). 2012 research had identified Indonesian city Palu as high risk of liquefaction. Retrieved from https://theconversation.com/2012-research-had-identified-indonesian-city-palu-as-high-risk-of-liquefaction-104578
- Miranti Widya Ramlah, (2017). Pengaruh Kota Palu sebagai pusat pertumbuhan terhadap pertumbuhan ekonomi wilayah hinterland. *Jurnal Katalogis*, 72-79.
- Miyajima, M. S. (2019). Geotechnical damage in the 2018 Sulawesi earthquake, Indonesia. *Geoenvironmental Disasters*.
- Moore, C. A. (2012). Building community resilience: What can the United States learn from experiences in other countries? *Disaster medicine and public health preparedness*, 292-301.
- Muamar. (2017). Studi Perkembangan Aktivitas Perekonomian pada Struktur Ruang Pusat Kota Palu. *e Jurnal Katalogis, Volume 5 Nomor 4,* 194-205.
- Mujahid, (2015). Internal Migration in Indonesia. *UNFPA Indonesia Monograph Series:* No.3.
- Mursid, F. (2019, Agustus 1). JK Bandingkan Tantangan Transmigrasi Saat ini dan masa lalu. Retrieved from https://www.republika.co.id/berita/pvjrzh428/jk-bandingkan-tantangan-transmigrasi-saat-ini-dan-masa-lalu
- Mustopa, M. (2020). *Proses pengakuan agama Khonghucu pada masa pemerintahan Abdurrahman Wahid (2000-2001)*. Bandung: UIN Sunan Gunung Djati.

- Wijaya, Nurrohman. (2015). Climate Change Adaption Measures in the Coastal City of Semarang, Indonesia: Current Practices and Performance. Jurnal Perencanaan Wilayah dan Kota. 26. 28-42. 10.5614/jpwk.2015.26.1.4.
- National Research Council. 2012. *Disaster Resilience: A National Imperative*. Washington, DC: The National Academies Press. https://doi.org/10.17226/13457
- Newman, T. A. (2011). *Planning world cities: globalization and urban politics*. New York: Palgrave Macmillan.
- Norris, Fran & Stevens, Susan & Pfefferbaum, Betty & Wyche, Karen & Pfefferbaum, Rose. (2008). Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness. American journal of community psychology. 41. 127-50. 10.1007/s10464-007-9156-6.
- Nova, Y. (2016). Dampak transmigrasi terhadap kehidupan sosial masyarakat: studi sejarah masyarakat timpeh dharmasraya. *Jurnal Ilmu Sosial Mamangan*, 23-36.
- Noveria. (2010). Fenomena Urbanisasi dan kebijakan Penyediaan Perumahan dan Permukiman di Perkotaan Indonesia. *Masyarakat Indonesia Vol. 36, no 2,* 103-124.
- O'Keefe, P. W. (1976). Taking the naturalness out of natural disasters. *Nature*, 260(1), 566-700.
- Obrist. (2010). *Multi Layered Sosial Resilience: A New Approach is Mitigation Research. Progress in Development Studie.* Sage Publication.
- OECD/European Commission. (2020). *Cities in the World: A NEW PERSPECTIVE ON URBANISATION*. OECD Publishing, Paris, https://doi.org/10.1787/d0efcbda-en.
- Omar Bello, A. B. (2020). Planning for disaster risk reduction within the framework of the 2030 Agenda for Sustainable Development. United Nations publication.
- Onodugo, V. A, & Ezeadichie, N. H. (2019). Future Planning of Global South Cities with Inclusive Informal Economic Growth in Perspective. In A. Almusaed, A. Almssad, & L. T. Hong (Eds.), Sustainability in Urban Planning and Design. IntechOpen. https://doi.org/10.5772/intechopen.89145.
- OpenStreetMap contributor. (2015). OpenStreetMap Data Extracts [digital geospasial data]. Retrieved from https://download.geofabrik.de

- Palm, R., & Carroll, J. (1998). Illusions of Safety: Culture and Earthquake Hazard Response in California and Japan (1st ed.). Routledge. https://doi.org/10.4324/9780429039713
- Palu Statistic Municipality. (2010). *Kota Palu Dalam Angka.* Palu: Badan Pusat Statistik Kota Palu.
- Pandaya. (2006, April 1). *Lets revive religious tolerance on all side*. Retrieved from Thejakartapost: Http://thejakartapos.com
- Parura, T. P. (2020). Evaluation of Post-Earthquake, Tsunami, and Liquefaction Disaster Waste Management in Palu. *EDP Sciences*.
- Parwata, I. P. (2004). Peran Pemeritah Terhadap Modal Sosial Dalam Pembangunan Pariwisata Berbasis Masyarakat dan Berkelanjutan di Badung Utara.
- Paterson, Shona & Pelling, Mark & Nunes, Luci & de Araujo Moreira, Fabiano & Guida, Kristen & Marengo, Jose. (2017). Size does matter: City scale and the asymmetries of climate change adaptation in three coastal towns. Geoforum. 81. 109-119. 10.1016/j.geoforum.2017.02.014.
- Paton. (2001). Community resilience to volcanic hazard consequences. *Natural Hazards.*, 57-69.
- Paton, D. M. (2001). Community resilience to volacnic hauard consequences. *Natural Hazards*, *27*(2), 157-169.
- Pelling, M. (2012). Hazards, risk and urbanisation. In B. Wisner, Gaillard, J.C., & Kelman, I (Eds). Routledge handbook of hazards and disaster risk reduction, 145-155.
- Pemda Kota Palu. (2018). Rencana induk pemulihan dan pembangunan kembali wilayah sulawesi tengah pasca bencana.
- Pemda Sulawesi Tengah. (2019). *Rencana Rehabilitasi dan Rekonstruksi Pasca Bencana*.

 Retrieved from https://jdih.sultengprov.go.id:
 https://jdih.sultengprov.go.id/peraturan/PERGUB%20NOMOR%2010%20TAHUN%202019.pdf.
- Pfefferbaum, Rose & Pfefferbaum, Betty & Horn, Richard & Klomp, Richard & Norris, Fran & Reissman, Dori. (2013). The Communities Advancing Resilience Toolkit (CART): An Intervention to Build Community Resilience to Disasters. Journal of public health management and practice: JPHMP. 19. 250-258. 10.1097/PHH.0b013e318268aed8.

- Pfefferbaum B, Pfefferbaum RL, Van Horn RL. Community Resilience Interventions: Participatory, Assessment-Based, Action-Oriented Processes. American Behavioral Scientist. 2015;59(2):238-253. doi:10.1177/0002764214550298.
- Pickett, S. C. (2004). Resilient cities: meaning, models, and metaphor for integrating the ecological, socio-economic, and planning realms. *Landscape and Urban Planning*, 69(4), 369-384.
- Porter, James I. "Erich Auerbach and the Judaizing of Philology." *Critical Inquiry*, vol. 35, no. 1, 2008, pp. 115–47. *JSTOR*, https://doi.org/10.1086/595631. Accessed 13 Sep. 2022.
- Powell, E. A. (2003). *Analysing Qualitative Data,*. University of Wisconsin.
- Prasetya, G. B. (2012). Debris dispersal modeling for the great Sumatra Tsunamis on Banda Aceh and surrounding waters. *Nat Hazards 60*, 1167–1188.
- Prasetyo, E. P. (2019). Macroeconomic Fundamentals. Beta Offset, Yogyakarta.
- Prihatmoko. (2005). *Pemilihan Kepala Daerah Langsung; Filosofi, Sistem, dan Problema Penerapan di Indonesia*. Yogyakarta: Pustaka Pelajar.
- Priyo, A. H. (2009). Relationship between General Allocation Fund, Capital Expenditure and Quality of Human Development. *The 3rd National Conference UKWMS*. Surabaya.
- Purwanto. (2007). Menggapai Damai di Poso. Jakarta: Cipta Mandiri Bangsa.
- PuSGeN. (2019). Assessment on Palu Earthquake 2018, Indonesia, National Center for Earthquake Studies, Research and Development Agency of Ministry of Public Work and Housing, 978-602-5489-14-3.
- Puslitbang SDA, K. P. (2019). Dukungan Litbang Untuk Pemulihan Sumber Daya Air Pascabencana Alam di palu, Sigi, Donggala, dan Parigi Moutong (PADAGIMO), Sulawesi tengah. Jakarta: Kementrian Pekerjaan Umum dan Perumahan Rakyat.
- Putra, A. A. (2018). Efektifitas Pelaksanaan Program Bantuan Sosial Pada Masyarakat Di Kota Palu (Studi Tentang Kelompok Usaha). *Journal Katalogis, Volume 6 Nomor 8*, 1-8.
- Rafliana, I. (2014). Pengurangan Risiko Bencana: Sebuah Restrospeksi Pasca-Tsunami Aceh 2004. *Jurnal Ilmu Kesejahteraan Sosial*, 48-60.

- Rahman, A. B. (2011). GOOD GOVERNANCE: INDONESIA'S CHALLENGES AND OPPORTUNITIES. Widyariset, Vol. 14 No.1, .
- Rajindra. (2019). Diversity, Resilience, and Tragedy: Three Disasters in Palu of Indonesia. International Journal of Innovation, Creativity and Change. Volume 5, Issue 2, Special Edition, 1592-1607.
- Rakodi, C. (2002). *Urban Livelihoods: A People-Centred Approach to Reducing Poverty.*London: earthscan.
- Ramadhani, S. (2011). Seismicity Conditions and Impact For Palu City. *Infrastruktur*, 111 119.
- Ray, D. (1998). "Development Economics". Princeton: Princeton University Press.
- REACH. (2019, February). Central Sulawesi Earthquake, Tsunami, and Liquefaction:
 Population Needs Multi-Sector Needs Assessment: Sub-District Profiles, Palu
 City, February 2019. Retrieved from
 https://reliefweb.int/report/indonesia/central-sulawesi-earthquake-tsunamiand-liquefaction-population-needs-multi-0.
- Rego, M. S. (2005). World Hospitals and Health Services. *PubMed*, 3-5.
- Renschler, Chris & Frazier, Amy & Arendt, Lucy & Cimellaro, G. & Reinhorn, Andrei & Bruneau, M. (2010). Framework for defining and measuring resilience at the community scale: The PEOPLES resilience framework. MCEER Technical Report MCEER-10-006, University at Buffalo.
- Rianto, J. (2019). Peran Sayyid Idrus Bin Salim Aljufri Dalam Mendirikan Madrasah. Nosarara: Jurnal Pendidikan dan Ilmu Sosial.
- Ricklef. (2008). Sejarah Indonesia Modern. Jakarta: Serambi Ilmu Pustaka.
- Rifai Mardin. (2011). Analisis Perkembangan Fisik Kota Palu dengan Citra Landsat. *Ruang Journal Volume 3 Nomor 1*.
- Romdiati, H. (2016). *Mobilitas penduduk antar daerah dalam rangka tertib pengendalian migrasi masuk ke Jakarta.*
- Rondinelli, D. (1986). Financing the Decentralization of Urban Services in Developing Countries: Administrative requirement for Fiscal. *Studies in Comparative International Development, vol* 25, 43-59.

- Ropi, I. (2017). Religion and Religious Life in Indonesia: Legacies from the Past. *Springer*, 43-56.
- Rose, A. (2009). *Economic Resilience to Disasters*. CARRI Research Report 8. Available at http://www.resilientus.org/library/Research Report 8 Rose 1258138606.pdf.
- Rubin, C. B. (1985). *Community Recovery From a Major Natural Disaster.* Boulder, CO: University of Colorado, Institute of Behavioral.
- Rudy. (2017). 18 Years of Decentralization Experiment in Indonesia: Institutional and Democratic Evaluation. *Journal of Politics and Law Vol 10, No 5*, 132-139.
- Ruhana, A. S. (2012). Profil gerakan dakwah di kota Palu. *Jurnal Multikultural & Multi Religious Vol 11*.
- Rumbach, Andrew. (2016). Disaster Governance in Small Urban Places: Issues, Trends, and Concerns. 10.1007/978-981-287-649-2 6.
- Rustiadi, Ernan & Junaidi, Junaidi. (2011). Transmigrasi dan Pengembangan Wilayah.
- Sadiqi, Zabihullah & Coffey, Vaughan & Trigunarsyah, Bambang. (2012). Rebuilding Housing after a Disaster: Factors for Failure. 10.13140/2.1.2656.8965.
- Salim, F. (2006). *Urbanisasi, Desa-Kota, Pusat Pertumbuhan,.* Retrieved from http://www.sinarharapan.go.id/.
- Sarmiati. (2019). Analisis Faktor Ekonomi dan Sosial Ekonomi Terhadap Peluang Penserapan Tenaga Kerja Dipasar Kerja Kota Palu. *e-Jurnal Katalogis, Volume 3 Nomor 1*, 147-155.
- Sassa, S., Takagawa, T. Liquefied gravity flow-induced tsunami: first evidence and comparison from the 2018 Indonesia Sulawesi earthquake and tsunami disasters. Landslides 16, 195–200 (2019). https://doi.org/10.1007/s10346-018-1114-x
- Sassen. (2001). *The global city: New York, London, Tokyo.* Princeton: Princeton University Press.
- Satterthwaite. (2001). Environmental Governance: Comparative studies of Nine Cities. *Journal of International Development, vol 13,,* 1009-1014.
- Satterthwaite. (2007). Adapting to climate change in urban areas: the possibilities and constraints in low- and middle-income nations. *IIED Human Settlements Discussion Paper Series*, 1.

- Satterthwaite, D. (2011). How can urban centers adapt to climate change with ineffective or unrepresentative local governments. *WIREs Climate Change Vol 2*, 767-776.
- Scudder, T. (2012). Resettlement Outcomes of Large Dams. *Impact of Large Dams: A global Assessment*, 37-67.
- Seasons, M. (2003). Indicators and Core Area Planning: applications in Canada's mid-size cities. *Planning Practice and Research*, 63-80.
- Seiffert, H. (2003). Einführung in die Wissenschaftstheorie 1. C. H. Beck'sche Verlagsbuchhandlung,. München.
- Setiadi, N. J. (2014). Assessing People's Early WarningResponse Capability to Inform UrbanPlanning Interventions to Reduce Vulnerability to TsunamisCase Study of Padang City, Indonesia. München: des Instituts für Geodäsie und Geoinformationder Rheinischen Friedrich-Wilhelms Universität BonnISSN 1864-1113, Nr. 43,.
- Setiawan, N. (2006). *Satu Abad Transmigrasi di Indonesia: Perjalanan Sejarah Pelaksanaan, 1905-2005.* Bandung: Pustaka Unpad.
- Shamsuddin, S. (2020). Resilience resistance: The challenges and implications of urban resilience implementation. *Elsevier*.
- Shandra. (2013, Maret). Prospek Perekonomian Provinsi Sulawesi tengah Tahun 2013. Pembangunan, Bappeda Provinsi Sulawesi Tengah, pp. 18-20.
- Shatkin, Gavin. (2013). Reinterpreting the Meaning of the 'Singapore Model': State Capitalism and Urban Planning. *International Journal of Urban and Regional Research*. 38. 10.1111/1468-2427.12095.
- Shatkin, Gavin. (2019). The Planning of Asia's mega-conurbations: contradiction and Contestation In Extended Urbanization. *International Planning Studies, Vol. 24 No.* 1, DOI: 10.1080/13563475.2018.1524290, 68-80.
- Sherlock. (1998, April 8). *Parliament of Australia*. Retrieved from www. APH.gov.au: https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Publications_Archive/CIB/CIB9798/98cib13
- Simpson, N. B. (2017). Demographic and economic determinants of migrationPush and pull factors drive the decision to stay or move. *IZA World of Labor*.

- Smith. (2012). Planning for post-disaster recovery: A review of the United States Disaster assistance framework. Fairfax, VA: Island Press.
- Soesastro, H. (1999). Civil Society and Development: The Missing Link. . *Policy Spring, pp.* 10–15.
- Sukamto. (1973). *Reconnaissance geological map of Palu area, Sulawesi. scale 1:250.000.*Bandung: Geological Survey of Indonesia.
- Sukirno, S. (2010). Macro Economic Theory Introduction. Jakarta: Radjawali Press.
- Surjomihardjo. (2002). *Beberapa Segi Perkembangan Sejarah Pers di Indonesia.* Jakarta: Kompas.
- Surono. (2013). Geologi Sulawesi,. LIPI Press. Jakarta.
- Suryadinata, L. (2002). Negara dan Etnis Tionghoa. Jakarta: Pustaka Pelajar.
- Suryadinata, L. (2013). Kebijakan Negara Indonesia terhadap Etnik Tionghoa:Dari Asimilasi ke Multikulturalisme. journal of *ANTROPOLOGI INDONESIA 71*.
- Susanto, H. (2020, Retrieved 27 April 2021). 2 Tahun Tsunami Palu: Perjuangan Pulihkan Pertanian di Tengah Pandemi: Retrieved from https://www.liputan6.com/regional/read/4368358/2-tahun-tsunami-paluperjuangan-pulihkan-pertanian-di-tengah-pandemi
- Susilo, H. e. (2020). Peta bencana Palu. Retrieved 28 April 2021 from https://www.kompas.id/baca/nusantara/2020/01/27/peta-bencana-palu-abaikan-survei-bmkg/.
- Syaikhu. (2002). Regional Autonomy in Indonesia: Field Experiences and Emerging Challenges. The 7th PRSCO Summer Institute/The 4th IRSA International Conference: "Decentralization, Natural Resources, and Regional Development in the Pacific Rim. Bali.
- Syrquin, Moshe and Chenery, Hollis (1989): *Three decades of industrialization*. Published in: World Bank Economic Review: pp. 145-181.
- Tadjoedin, S. M. (2001). Regional Disparity and vertical conflict in Indoneisa. *JOurnal of the Asia Pacific Economy*, 283-304.
- Tadulako University. (2021, February 23). *Sejarah Untad*. Retrieved from Sejarah Untad: https://untad.ac.id/sejarah-untad/

- Tambunan, M. (2000). Indonesia's New Challenges and Opportunities: Blueprint for Reform after the Economic Crisis, East. *East Asia; An International Quarterly,* 18(2), pp.50.
- Taufan. (2019). Huntara tidak diminati. *Retrieved 28 April 2021 from https://mediaindonesia.com/nusantara/264097/500-bilik-huntara-tidak-diminati-warga*.
- Taylor, P., Derudder, B., Saey, P., & Witlox, F. (Eds.). (2006). Cities in Globalization: Practices, Policies and Theories (1st ed.). Routledge. https://doi.org/10.4324/9780203962978
- Tenggara, A. P. (2015). Analisis Struktur Ekonomi dan Identifikasi Sektor-sektor Unggulan di Kota Palu. *e-Jurnal Katalogis, Volume 3 Nomor 7,*, 163-174.
- The coordination of national survey and mapping. (1991). *Topographic map of Indonesia, Sheet no. 2015-32, Palu.* Bandung: Bakosurtanal.
- Thein, P. S. (2014). Estimation of seismic ground motion and shaking parameters based on microtremor measurements at Palu City, Central Sulawesi Province, Indonesia. World Academy of Science, Engineering and Technology International Journal of Geological and Environmental Engineering,, 308-319.
- Tierney & Bruneau. (2007). Conceptualizing and measuring resilience; A key to disaster loss reduction. TR news.
- Tierney, K. (2012). Disaster Governance:Social, Political, and Economic Dimensions. *Annual Review of Environtment and Resources*, 341-363.
- Tiktik Sartika Partomo; Lolita Krisnawati; Rachman Soejoedono. (2002). *Ekonomi skala kecil/ menengah dan koperasi / Tiktik Sartika Partomo, Abd. Rachman Soejoedono; editor Lolita Krisnawati*. Ciawi: Ghalia Indonesia.
- Timmerman. (1981). *Vulnerability, resilience, and the collapse of society: A review of models and possible climatic applications.* Toronto: University of Toronto.
- Tirtosudirmo, R. (1990). TRANSMIGRATION AND ITS CENTRE-REGIONAL CONTEXT: THE CASE OF RIAU AND SOUTH KALIMANTAN PROVINCES/ INDONESIA. Australian National University.
- Tjoe, T. L. (2008). *Rahasia sukses bisnis etnik tionghoa di Indonesia*. Yogyakarta: Media Presindo.

- Tobin, G. A. (1999). Sustainability and community resilience: the holy grail of hazards planning? *Environmental hazard*, 1(2), 13-25.
- Todaro, M. P. (2006). *Economic Development*. Erlangga.
- Triutomo, S. (2007). *Prinsip Dasar Manajemen Bencana.Badan Penanggulangan Bencana Nasiona.*
- Triyanti, Annisa & Surtiari, Gusti & Lassa, Jonatan & Rafliana, Irina & Hanifa, Nuraini & Muhidin, Mohamad & Djalante, Riyanti. (2022). Governing systemic and cascading disaster risk in Indonesia: where do we stand and future outlook. Disaster Prevention and Management: An International Journal. 10.1108/DPM-07-2022-0156.
- Turner. (2003). A framework for vulnerability analysis in sustainability science. PNAS, 100(14).
- Twigg, J. (2007). Characteristics of a disaster resilient community. Retrieved from: www.proventionconsortium.org/themes/default/pdfs/characteristics/community_characteristics_en_lowres.pdf[Accessed 10 October 2021].
- UCLG. (2016). *uclg frame document Intermediary Cities; Planning and management of sustainable urban development.* United Cities and Local Government.
- UN General Assembly. (2018). The state of food security and nutrition. *World Food Programme*.
- UN Habitat. (2014). The Impact of Decentralization and Urban Governance on Building Inclusive and Resilient Cities. *Asia-Pacific Urbanization and Climate Change Issue Brief Series No.2*.
- UNDRR & UNESCO-IOC. (2019). "Limitations and Challenges of Early Warning Systems: A Case Study from the 2018 Palu-Donggala Tsunami". United Nations Office for Disaster Risk Reduction (UNDRR), Regional Office for Asia and the Pacific, and the Intergovernmental Oceanographic Commissio. Jakarta: UNDRR.
- UN-Habitat. (2015). *The Challenge of Local Government Financing in Developing Countries.* Nairoby: UN-HABITAT.
- Urbaningrum. (1999). Ranjau-Ranjau Reformasi. Jakarta: PT Raja Grafindo Persada.
- USAID ASIA. (2007). How Resilience is your Coastal Community? A Guide for Evaluating Coastal Community to Tsunamic and Other Hazard. Bangkok.

- Utomo, L. P. (2018). Land Use Change as A Potensial Reduction of Biodiversity in Palu Bay Central Sulawesi. *International Journal of Scientific & Engineering Research Volume 9*, 1761-1766.
- Véron, R. (2010). Small Cities, Neoliberal Governance and Sustainable Development in the Global South: A Conceptual Framework and Research Agenda. *Sustainability, doi:10.3390/su2092833*, 2833-2848.
- Vidyatama. (2008). *Patterns of Provincial Economic Growth in Indonesia*. The Australian National University.
- Wagner, M., & Growe, A. (2021). Research on Small and Medium-Sized Towns: Framing a NewField of Inquiry. *World*, 105-126.
- WALHI. (2000). "Situasi Poso" unpublished report on the Poso riots.
- Walker, B. H. (2004). Resilience, adaptability and transformability in social–ecological systems. *Ecology and Society*, *9*(2).
- Wamsler. (2004). Managing urban risk: Perceptions of housing and planning as a tool for reduc-ing disaster risk. *Global Built Environment Review Vol 4*, 11-28.
- Watkinson, I. (2011). Ductile flow in the metamorphic rocks of central Sulawesi, in R. Hall, M.A. Cottam, and M.E.J. Wilson, eds., The SE Asian Gateway: History and Tectonics of the Australia-Asian Collision: Geological Society of America. *London Special Publication 355, pp.*, 157–176.
- Watson. (2009). Seeing from the south: refocusing urban planning on the Globe's central issues. *Uban studies, doi.org/10.1177/0042098009342598*, 2259-2275.
- Watts MJ, Bohle HG. The space of vulnerability: the causal structure of hunger and famine. Progress in Human Geography. 1993;17(1):43-67. doi:10.1177/030913259301700103
- Webster. (2002). *On the Edge: Shaping the Future of Peri-urban East Asia.* Stanford: Stanford university.
- Wagner, Madeleine & Growe, Anna. (2021). Research on Small and Medium-Sized Cities: Framing a New Field of Inquiry. World. 2. 105-126. 10.3390/world2010008.
- White, B. N. (1980). Rural Household Studies in Anthropological Perspective. Bunga rampai: Rural Household Studies in Asia. Singapore University Press.

- White, Robin & Edwards, Warren & Farrar, Ann & Plodinec, John. (2015). A Practical Approach to Building Resilience in America's Communities. American Behavioral Scientist. 59. 200-219. 10.1177/0002764214550296.
- Wiratraman. (2011). Breaking The Silence, Does Post-Soeharto Indonesian Law System Guaran-tee Freedom of the Press?". *Leiden University Scholarly Publication*, 102-120.
- Wisner, Mark Pelling, Adolfo Mascarenhas, Ailsa Holloway, Babacar Ndong, Papa Faye, Jesse Ribot, and David Simon (2015). Small Cities and Towns in Africa: Insight into Adaptation Challenges and Potentials. In A. C. S. Pauleit, *Urban Vulnerability and Climate Change in Africa: A Multidisciplinary Approach*. Springer International Publishing.
- Wisner, B., Blaikie, P., Cannon, T., & Davis, I. (2004). At Risk: Natural hazards, people's vulnerability and disasters (2nd ed.). Routledge. https://doi.org/10.4324/9780203714775
- Woltjer, J. (2014). A Global Review on Peri-Urban Development and Planning. *Jurnal Perencanaan Wilayah dan Kota*, 1-16.
- World Bank & United Cities and Local Governments. (2008). Constitutional reforms in India, Indonesia, the Philippines, and Thailand have increased local government autonomy, and mayors are now elected in these and several other Asian countries. 57-58.
- World Bank. (2006). *world development report; Equity and Development, DOI:* 10.1596/978-0-8213-6249-5. Washington DC.
- World Bank. (2009). World Development Report 2009, Reshaping Economic Geography. Washington DC, USA.
- Yery, W. (2000). Dinamika ekonomi politik awal Orde Baru: 1966-1968. Jakarta.
- Sadiqi, Zabihullah & Coffey, Vaughan & Trigunarsyah, Bambang. (2012). Rebuilding Housing after a Disaster: Factors for Failure. 10.13140/2.1.2656.8965.
- Zahir, L. N. (2022). Evaluasi Pelaksanaan Desentralisasi dan Otonomi Daerah dan Perspektif Masa Depan.
- Zahnd & Markus. (2009). Perencanaan Kota Secara Terpadu. Yogyakarta: Kanisius.
- Zakour, G. D. (2013). *Community disaster vulnerability: Theory, research, and practice.*Retrieved from https://www.springer.com/gp/book/9781461457367.

Zulfiah. (2013). KOMUNIKASI ANTARUMAT BERAGAMA SEBAGAI RESOLUSI KONFLIK DI KOTA PALU. Makassar: UIN ALAUDDIN MAKASSAR.