

## **Urban People Livelihood Diversification: Strategy and Sustainability**

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### **ABSTRACT**

It is not only people in rural areas who have diversified their livelihoods, but also people in marginal urban areas. However, research on the diversification of livelihoods by the urban poor was not widely available. Therefore, to fill this gap, the study aimed to examine the poor in urban areas in carrying out strategies and sustainability of livelihood diversification. The method used in this study was a descriptive method with a survey approach. The samples were collected with simple random sampling. The processing of data was carried out by tabulation. The results showed that a number of the urban people work in the non-farm sector like laborer rent. There were two strategies of livelihood diversification. The first one was the use of assets such as selling long-term crops and renting two-wheeled vehicles. The second one was through friendship to get several jobs. The determinants of livelihood diversification were assets and opportunities. The motivation of urban communities to diversify their livelihoods was to reduce risk and increase additional income. The analysis concluded that sustainable livelihoods in the off-farm sector were selling activities and the non-farm sector as construction workers or port workers. Knowing the diversification of the livelihoods of urban communities could be a consideration for the government to empower the right livelihoods to overcome urban poverty.

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**Keywords:** Livelihoods; Diversification; Strategy; Sustainability; Asset.

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### **INTRODUCTION**

In general, the diversification of livelihoods is a process undertaken by communities in rural areas. However, in rural areas, poor people or those with low incomes also engage in livelihood diversification in order to overcome the stress and crises associated with their livelihoods. Previous research (Ellis, 1998) indicated that the diversification of livelihoods occurs as a spontaneous reaction to crises that a person or community has experienced. The decision to diversify livelihoods is influenced by a number of factors, including seasonal fluctuations, labor distribution, and strategic considerations. Warren (2002) asserted that the availability of assets and opportunities played a role in determining whether an individual or group would pursue livelihood diversification. Conversely, Masese (2021) posited that the decision to diversify livelihoods was influenced by the lack of fixed income or joblessness. Ellis (2000) posited that individuals with low income levels diversified their livelihood strategies to enhance economic conditions. In the article by Sroe & Saliem (2003) on the diversification of population income in Indonesia, it was stated that households in rural areas had four to six sources of income, while in urban areas, in addition to maintaining income, they also optimize their resources.

The concept of livelihood has been applied to urban contexts, drawing on insights from rural livelihood studies (Amin, 2014). This approach considered livelihood strategies, vulnerability, capabilities, and assets. Preceding research (Wratten, 1995; Satterthwaite, 1997) indicated that the level of commercialization in urban areas was considerable, with all transactions conducted in cash. This results in poor households in urban areas requiring a higher cash income than those in rural areas. In rural areas, livelihoods were derived from activities such as crop cultivation, livestock rearing, forestry, and fishing, which are often dependent on natural capital. In urban areas, livelihoods were typically obtained through engagement in non-agricultural labour markets or the production and sale of goods and services. Moreover, access to land for housing and construction materials in rural areas was not a significant issue, whereas

in urban areas, access to land for housing was a considerable challenge. In rural areas, access to infrastructure and services, as well as opportunities to obtain cash, remains limited. In urban areas, access to infrastructure and services was challenging for low-income groups due to high prices and a high reliance on cash (Satterthwaite, 2000, in Farrington et al., 2002).

Helmy (2020) examined changes in livelihood diversification and livelihood strategies between rich and poor households in Egypt. The findings revealed that rural households had more diverse livelihoods than urban households. While both rich and poor rural households had diversified their livelihoods, the former had started to develop off-farm livelihoods, whereas the latter remained dependent on agriculture. Urban poor households depended on informal livelihoods, pension receipts, and social assistance. The strategies referenced in the study (Helmy, 2020) encompassed formal and informal employment, classified as primary and secondary livelihoods. However, the study did not delve into the strategies associated with securing employment or the long-term sustainability of these jobs. A further study conducted by Abass et al. (2013) on households residing in the suburbs of Kumasi, Ghana, revealed that as a consequence of the conversion of agricultural lands into other functions, suburban households who previously depended on land use began to implement livelihood strategies in order to survive. Therefore, the strategies adopted by households living in the suburbs of Kumasi include diversification, intensification, and migration. These were designed to enhance household resilience, increase income, and reduce expenditure. The impact of these strategies has an effect on the income levels of suburban households, stabilizing and even increasing.

The tsunami that struck Manokwari Regency, West Papua Province in the 2000s caused extensive damage to numerous locations where people lived. As a result, the government relocated residents and placed them in new settlements that were geographically distinct from their previous residence locations. The relocation of residents from *Angkasa Mulyono* village and *Arowi* Village, situated on the coast, has resulted in differences in the manner in which they pursue their livelihoods (Abdullah in Wetebossy, A, Y, S, 2001). Wetebossy, A, Y, S (2001) conducted a study in *Kampung Angkasa Mulyono* and found that there were additional new livelihoods where residents carried out activities in agriculture. However, the study did not discuss the strategies of residents in diversifying their livelihoods and their sustainability. Therefore, this study examines the livelihood diversification strategies carried out by residents in these two locations and the sustainability of livelihood diversification. In addition, there have not been many studies on livelihood diversification by poor people in urban areas compared to the literature on livelihood diversification in rural areas. In fact, information on the livelihood diversification of the poor in urban areas can be used as a consideration for the government in overcoming the negative impacts that arise due to poverty experienced by residents in urban areas. Therefore, this study was also conducted to enrich the literature on livelihood diversification by the poor in urban areas.

The novelty of this research lies in its investigation of the livelihood diversification strategies employed by residents who were relocated to a new location due to natural disasters, as well as the sustainability of these strategies. The two objectives of this research are therefore as follows: firstly, to examine the livelihood diversification strategies carried out by residents in *Kampung Angkasa Mulyono* and *Kampung Arowi*; and secondly, to examine the sustainability of these strategies. It is hoped that this novel approach will provide insights into the livelihood diversification strategies employed by impoverished urban residents and serve as a foundation for local governments seeking to empower these individuals and reduce urban poverty levels.

Livelihood diversification, traditionally seen as a rural phenomenon, is equally critical for urban poor communities grappling with economic instability. This study explores the strategies and sustainability of livelihood diversification among residents of *Kampung Angkasa Mulyono* and *Kampung Arowi* in Manokwari, West Papua, who were displaced by the 2000s

tsunami. The research has two main objectives: first, to analyze the diversification strategies employed by these communities, such as leveraging assets like land or vehicles and utilizing social networks for job opportunities; and second, to evaluate the long-term sustainability of these strategies in terms of economic viability, social equity, and environmental impact. By addressing these objectives, the study aims to fill a gap in existing literature, which predominantly focuses on rural contexts, and to provide actionable insights for policymakers seeking to empower urban poor populations. The findings are expected to contribute to more effective poverty alleviation programs by identifying resilient livelihood models that can enhance income stability and reduce vulnerability in marginalized urban areas.

### **Livelihood Concept**

The concept of livelihood is a dynamic one as it evolves continuously in accordance with socio-economic changes in society and environmental changes (Chambers, R., & Conway, G., 1992; Scoones, I., 1998; Ellis, F., 1998). Initially, the concept of livelihoods was a combination of capability, equity, and sustainability (Chambers, R., & Conway, G., 1992; Scoones, I., 1998). This concept continues to evolve by taking into account aspects that occur in society as seen in the concept of sustainability, which not only focuses on sustainable environment but also on social aspects and sustainable economic aspects (Elizabeth G King et al., 2019; Thi Mong, T.N., 2024; Yi-cheng, L., 2010).

In addition, expanding the scope of livelihoods also considers aspects of gender, technology, and innovation. Research from Flavia, A., Irene, L. A., Robert, S. E., & Phyllis, B. K. (2021); Amos Mwenda Ndeke, Jayne Njeri Mugwe, Hezron Mogaka, George Nyabuga, Milka Kiboi, Felix Ngetich, Monicah Mucheru-Muna, Isaya Sijali, Daniel Mugendi (2021) demonstrated that modern methods and technologies used in agricultural activities have a positive impact on women because they can increase production and income. However, there were women who experienced obstacles in using technology due to low expertise in using technology. Another aspect that was also developed in the concept of livelihood was the cultural element, because in some community groups the influence of cultural norms was very strong on women's lives and livelihoods and food security. For example, Choithani, C. (2020) explained that the discrimination between women and men in migration caused changes in women's lives, such as women carrying the added burden of production and reproduction responsibilities, taking the role of men working to ensure food security for the family while the husband is migrating to the city. It is conditions like this that cause the concept of culturally based livelihood to be a serious concern.

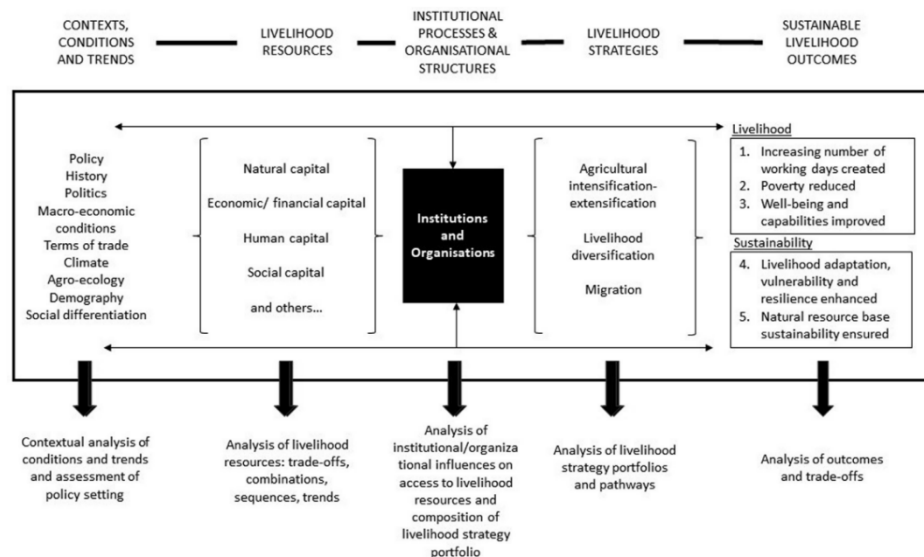
Another aspect included in the concept of livelihood was resilience to pressures and shocks, as well as the element of choice in determining the livelihood of a particular individual or group. Research (Elizabeth G King, 2019; Duan, Y., Chen, S., Zeng, Y., & Wang, X., 2023) stated that one of the factors affecting the resilience of communities impacted by government projects was the policies set by the government and systems that support resilience in the community. On the other hand, in another case, research from Chen S., Wu J., [...], Li R. (2023) stated that communities in tourist villages in China after Covid-19 managed to survive because of the role of three organizations, namely the government, companies, and the community itself. The role of the company was quite high in terms of buffer capacity and adaptive capacity, while the role of the government was more on transformation capacity.

Chambers, R., & Conway, G. (1992) defined livelihood as the ability, variety of assets, and activities needed as a tool for livelihood. Ability referred to the capacity of an individual or person to obtain a life where the life obtained by humans must be sustainable and equitable, so that a livelihood could be sustainable if the ability of humans, either individually or in groups, could overcome pressures and shocks so that they recovered quickly to continue working for current and future generations in a short or long time span. Equitable meant that the assets owned by human beings serve as the initial capital to obtain livelihoods and open

access for all people to access livelihoods. Scoones, I. (1998) added to the definition of livelihood by maintaining natural resources so that they were sustainable. Additionally, Ellis (1998) argues that a livelihood encompasses both cash and in-kind income (as well as social institutions: community, family, village, etc.), gender relations, and private property rights necessary to support and sustain a standard of living.

### Livelihood Framework

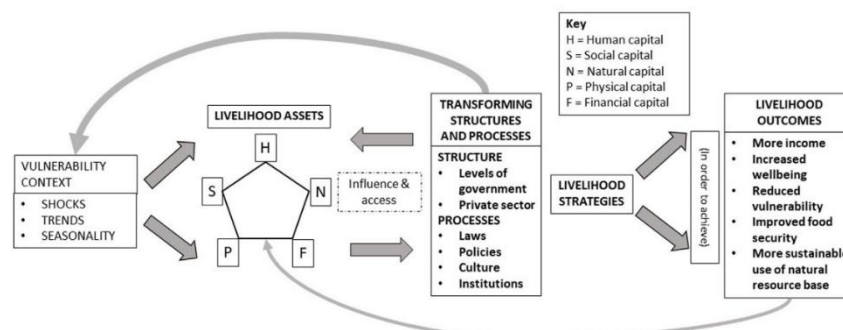
This study only presents the livelihood framework proposed by Scoones (1998) and that developed by the Department for International Development (DFID). The term "Scoones' version" is used to describe a model illustrating the various elements of livelihoods, including assets, vulnerability context, livelihood strategies, and livelihood outcomes.



**Figure 1. Sustainable Rural Livelihoods: A Framework for Analysis**

Source : N. Natarajan, A. Newsham, J. Rigg et al, 2022.

Livelihood Framework offered by DFID depicts the SLF with a focus on assets, livelihood strategies, and outcomes. It provides a visual representation of how these components interact to shape livelihoods. These figures served as visual aids to understand the key elements and relationships within the SLF, guiding the analysis of rural livelihoods and poverty alleviation strategies.



**Figure 2. The DFID Sustainable Livelihoods Framework: A Framework for Analysis**

Source : N. Natarajan, A. Newsham, J. Rigg et al, 2022.

### Livelihood Diversification

Diversification is a classification or distinction. There are many households that earn income from a single source of income, while there are households that use their assets to carry out only one activity. According to Ellis (1998), livelihood diversification was not the same as income diversification. Income diversification referred to the composition of household income over a short period of time, whereas livelihood diversification was an active social process where households were observed to continuously combine activities over time. Ellis (1998) further defined livelihood diversification as the process by which poor individuals or rural families developed a number of diverse activities to survive and improve their living standards. Livelihood diversification occurred as a spontaneous response to the crisis experienced.

Rural households relied on several types of livelihood activities as part of maintaining and improving living standards. Ellis (1998) in his article explained that the diversity of rural household income sources and the role of non-farm activities were useful in improving living standards and reducing vulnerability. Undertaking multiple activities to generate multiple sources of income in order to maintain and improve living standards was known as livelihood diversification. Livelihood diversification was essential for improving livelihood resilience and raising living standards in rural areas.

### **Livelihood Strategy**

A livelihood strategy is an organized set of lifestyle choices, goals, values, and activities influenced by biophysical, political/legal, economic, social, cultural, and psychological components and designed to secure an optimum quality of life for individuals and their families or social groups (Jennifer Walker, Bruce Mitchell & Susan Wismer, 2021). A livelihood strategy is a set of efforts and different alternatives employed by an individual or community to achieve prosperity as a result of their choices in how people live their lives (Illu et al., 2021).

The DFID's Sustainable Livelihoods Framework (*SLF*) includes "Livelihood Strategies" as one of its six inter-linked elements in which these strategies are influenced by the assets they have access to, the vulnerability context they are in, and the transforming structures and processes that affect their lives. In Scoones' extended Sustainable Livelihoods Framework (*SLF*), livelihood strategies are understood as the range of activities and choices that people make to achieve their livelihood goals. These strategies are influenced by the assets they have access to, the vulnerability context they are in, and the transforming structures and processes that affect their lives. Scoones' framework emphasizes the dynamic and evolving nature of these strategies, recognizing that they are continually in flux and subject to change due to various factors (Chambers, R., & Conway, G. R., 1992; Scoones, I., 1998; DFID, 1999; Ellis, F., 2000; N. Natarajan, A. Newsham, J. Rigg et al., 2022).

Livelihood strategies are dynamic and continuously evolving; therefore, individuals or households should be prepared to adjust their livelihood strategies in response to changing circumstances, such as shifts in the economy, environmental conditions, or government policy. For instance, regarding agricultural livelihoods, farmers in the face of climate change may need to adapt their livelihood strategies by adopting new crops, irrigation methods, or pest management techniques. For people who do off-farm livelihood activities, in response to changes in the job market, individuals may need to adapt their livelihood strategies by pursuing alternative employment opportunities or starting their own businesses. For those who work in non-farm livelihoods, as new industries emerge, individuals may need to adapt their livelihood strategies by acquiring new skills or transitioning to different sectors.

### **Livelihood Sustainability**

The concept of sustainable livelihoods was initially proposed by the Brundtland Commission on Environment and Development as a means of integrating socioeconomic and ecological considerations into a coherent and policy-relevant framework. At the 1992 United Nations Conference on Environment and Development (*UNCED*), the concept was further

developed, particularly in the context of *Agenda 21*, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. The report indicated that sustainable livelihoods could serve as an integrating factor that allows policies to address the simultaneous issues of development, sustainable resource management, and poverty eradication.

A livelihood is considered sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation. Furthermore, it contributes net benefits to other livelihoods at the local and global levels and in the short and long term (Chambers and Conway, 1992; Lasse Krantz, 2001; Nithya Natarajan, Andrew Newsham, Jonathan Rigg, Diana Suhardiman, 2022). In addition, Scoones (1998) and DFID (1999) posit that a livelihood can be considered sustainable if it does not compromise the natural resources.

## **METHOD**

### **Place and Time of Research**

The initial research was conducted in 2014, and then after 10 years, a repeated survey was carried out in 2024 to observe the changes that had occurred within the livelihoods of the community. The research took place in Manokwari City, West Papua, at two residential locations that were affected by the tsunami natural disaster. The first location involved residents who were relocated and settled in a coastal area, namely *Arowi Village*, East Manokwari District. The second location involved residents who were relocated and settled in a highland area, namely *Angkasa Mulyono Village*, West Manokwari District. The reason for selecting these two locations as research samples was due to the physical differences in geography and differences in the structure of the new houses. Initially, residents lived in the coastal area of *Sawaibu Bay*, where the majority constructed their houses on stilts above sea level, in accordance with the bay's natural contours. Following their relocation, some residents were resettled in the highlands with semi-permanent houses, while others were resettled in close proximity to the coast, also with semi-permanent houses. The beach was an open area; therefore, the residents were unable to anchor fishing boats or build houses in the form of stilts. It can be reasonably assumed that this condition affects the livelihoods of the population.

### **Research Methods**

The research methodology employed a descriptive approach, utilizing survey techniques. Initially, the location was determined through purposive sampling. Subsequently, respondents were selected through random sampling. The survey was conducted to identify the number of individuals who would be interviewed. The sampling technique was implemented at various stages. A total of 30 respondents were selected at random, as it was assumed that the socio-economic conditions of the population were similar. The research subject was the head of the family in each household. In the second research, using the same method, 20 respondents were interviewed using a questionnaire.

### **Data Analysis Method**

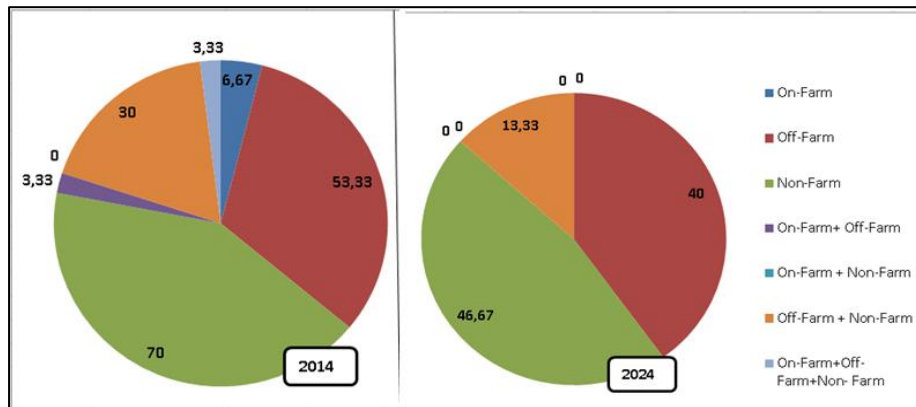
This study used primary data collected through interviews based on guided questions and observations, while secondary data were gathered through literature studies related to this research. The data obtained in the form of quantitative data were then tabulated and explained descriptively.

## **RESULT AND DISCUSSION**

In 2014, most of the population in new resettlement worked in off-farm. They varied their work in fishing, selling agriculture products, and pig farming. Although they have been relocated in the new location which is the highland area, residents still do fishing activities.

This was because in their previous place, they did the fishing activities in the surrounding of the bay. However, the place where they did the fishing activities after resettlement was different in their previous place. They caught up fish in another area as they got information about that area from their family who lived near to them in the new location. They put their fishing equipment in their new location near the new catching area.

With respect to non-farm, most of residents worked as construction workers, dockers, motorcycle taxi drivers, and renting room. They did these activities since they saw the opportunity to increase their income. As for farming, it done by a few household through borrowing the vacant land from the landlord and then cultivated the land for planting some vegetables.

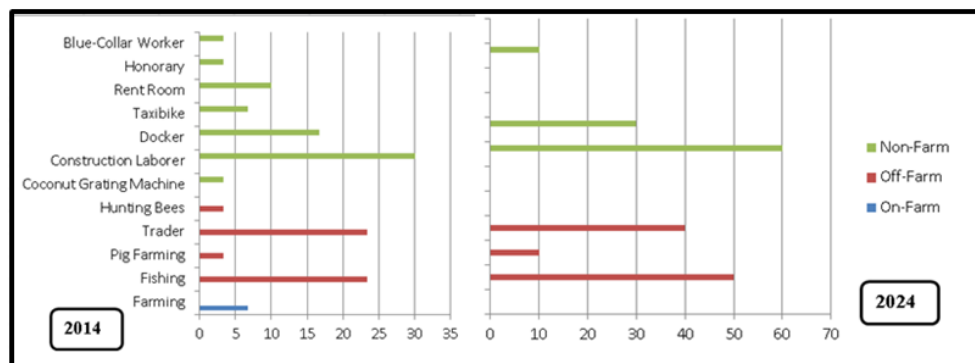


**Figure 3. Classification of Livelihood (%)**

Source : Primary Data, 2014; 2024

After 10 years later in 2024, the study carried out survey again. The findings depicts that people are no longer on farm whereas most of them still work in off-farm and non-farm activities. Sometime people combined the activities between off-farm and non-farm during the period. The reason people are no longer on-farm because the landowners have converted land previously used by residents for gardening into housing or rental properties. Another reason is that there is a demand for land for housing, so landowners sell the land to other parties for being used as housing. Abdulai et al, (2022) explained in their article that urban expansion leads to a narrowing of agricultural land, causing residents to lose food, which affects the food security of these urban communities. (Ramdani et al., 2022) emphasized that the combination of farming and non-farming is due to low education and limited access to land resources.

The types of work carried out by urban residents shown in picture 2



**Figure 4. The Types of Jobs**

Source : Primary Data, 2014; 2024



In 2014, on-farm livelihood such as farming was carried out by the urban, although it was only a small percentage. Farming activities were carried out around the yard by planting spices and fruit plants such as bananas, mangoes and areca nuts on a small scale, and most of the harvest was consumed by the owner. There were also residents borrowing other people's idle land for farming with the agreement that the owner of the idle land gives permission to use it for planting the short-term crops. The idle land could be taken by the land owner at any time without returning the cost of the plants that had been planted. The types of farming activities were to grow kale, spinach and herbs. The results from farming activities were used for household consumption and if there were excess products, it could be sold. Thus, the farming activity was classified as subsistence in nature because the farming orientation was only for household consumption.

Fishing activities carried out by some residents due to experience in fishing activities at the location of their old residence. However, residents moved to areas closed to the coast doing the fishing activities. Residents used canoes to do the fishing activities when the weather was clear and not bumpy. Sea products were used to fulfill family needs and if there are excess, they would be sold around the housing location (Sudrajat, 2016). Selling activities in the front of house done by the women. They sold huts with the types of goods sold mostly being children's snacks and agricultural products from the garden of backyard. They also bought vegetables in traditional central market for selling in their front of house. The challenge faced by those women was the competition for the same products sold by other women in the same neighborhood.

Formal non-farm livelihoods such as working as honorary civil servants in sub-district offices by residents with education levels up to junior high school or high school. The residents take this job because they have good friendships with the leadership at the sub-district office. Meanwhile, there is the residents doing the jobs in informal non-farm sectors such as construction workers and Dockers, motorbike taxis and renting out rooms. Residents who work as the unskilled laborers are physically quite heavy. They have no choice to look for the formal works due to limited education levels. However, if there is no demand for works in the port, the Dockers take the opportunity to work as motorbike taxi drivers. This work is done by those who own two-wheeled vehicles. This phenomenon shows that they do the livelihood diversification because they have the opportunity to do that. Residents who prepare the rooms or part of the space in their houses for rent are given to immigrants from Bugis, Makasar and Buton. The rented rooms are used as kiosks by the tenants.

In terms of gender, men can do several types of work while women only do one or two jobs. Jobs carry out by men include construction workers, dockers, motorbike taxis, gardening and fishing. Women carry out gardening activities in the backyard, in the sleeping area and did the trading in front of the house. (Sudrajat, 2016) stated that in the livelihood strategies between men and women, it can be seen that the role of men is more prominent in work that require physical strength and work that requires negotiation, while women utilize the function of an institution such as a social gathering group.

In this study, it could be seen that although the livelihood activities of men and women were different, both of them give contribution for the family income. The most of the resident's income come from informal non-farm work. (Ellis, 1998) explained that sources of non-farm income consisted of the wages from non-farm works, working alone/own business, rented houses/room and remittance.

Another form of strategy to diversify people's livelihoods was the utilization of assets such as selling plantation crops, selling livestock products, and using vehicles as motorbike taxis. Plantation assets such as areca palm plants were sold for meeting the daily needs. Meanwhile, wheeled vehicle assets, savings and pig farming are intended for urgent needs. For instance, the urgent needs were for medical costs or educational costs for one of the family

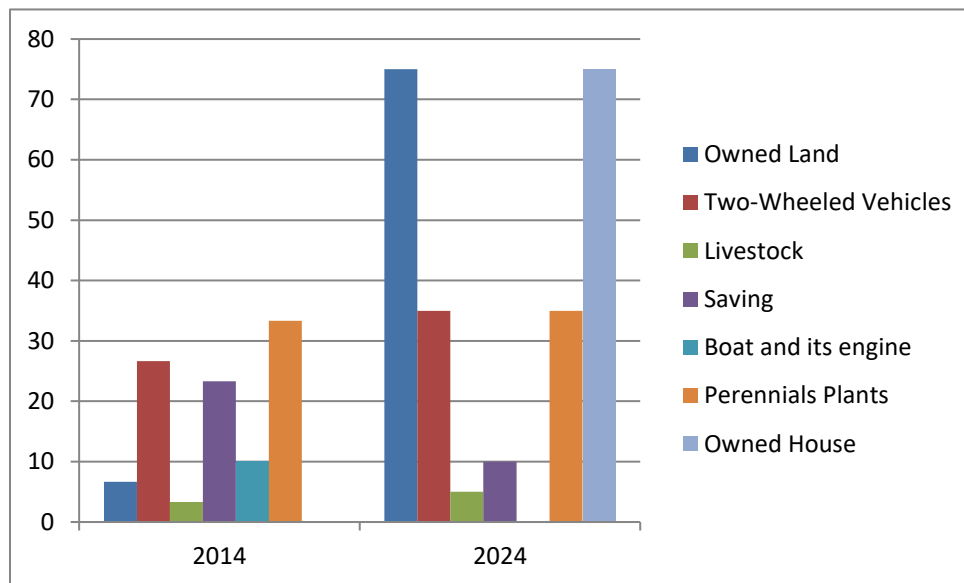


members. In addition, the study of (He, Y.; Ahmed, T., 2022) showed that physical and natural capital have a positive impact on the pure agriculture livelihood strategy.

Although, most people change their livelihood to become trader, the types of work carried out by urban residents still little bit similar with the work activities in 2014. Most of people still do their previous job such as fishing, construction laborer and docker when they lived in their old place where closely to the beach. Some of them shift from farming, and work as trader because they have no land to do the farm activities, moreover, the owner of the idle land converts their land to be built a house which is used for the rent house.

People back to their previous job as fisherman although they live in the highland area and far away from the beach for sustaining their livelihood. Sometimes they combine their job with other jobs such as, construction laborer and docker. When the weather is bad, the people will work as construction laborer or docker.

Assets owned by residents were explained in Table 3.



**Figure 5. The types of Assets owned by the Family (%)**

Source: Primary Data, 2014; 2024

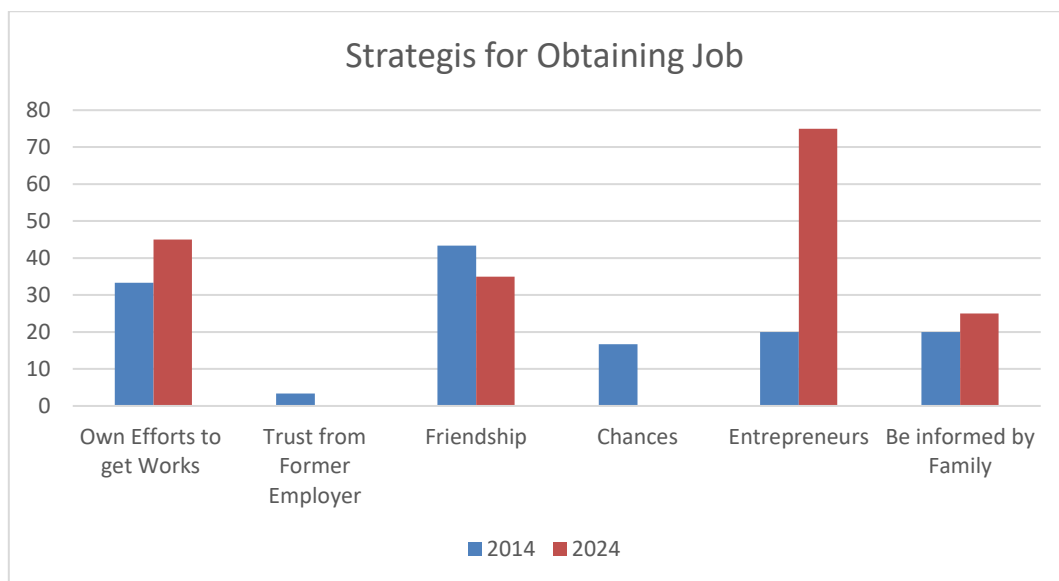
Most of the assets owned and utilized by the urban people for the livelihood strategies are natural capital, financial capital and physical capital. In 2024, there is a dramatic increase in owning the land and house. This is because most residents have an own certification for houses and land that they bought from their neighbors who came back to their previous place. As for saving, it experienced a decrease in number because residents save their money for education and health costs. According to (Illu et al., 2021) that the effect of assets on livelihoods was significant on livelihood strategies. Moreover, (Illui et al., 2021) reveals that people in Pandasari Village after the eruption of Mount Kelud in 2022 gain from mutually beneficial cooperation and trust each other in livelihood strategies due to social capital. Conversely, people in Nairobi Kenya living in the informal settlements utilized the financial assets through borrowing from the informal lenders, friends or family to diversify their livelihoods (Masese, 2021).

Poor people in cities tried to pursue various incomes even though the amount of income obtained was not significant to their asset ownership (Ersado, 2006). In (Wratten, 1995) and (Satterthwaite, 1997). It was stated that the obstacles faced in urban areas are that the level of commercialization was quite high and all transactions were carried out in cash so that poor

households in urban areas required higher income than households in rural areas. (Satterthwait, 2000) in (Farrington et al., 2002)) also added that the low-income urban groups experienced problems in accessing infrastructure and services due to high prices and all cash transactions. The resulting hardship and pressure experienced by poor urban was a reason for them to diversify their livelihoods. (Ellis, 1998) explained that the diversification of livelihoods occurred as a result of a spontaneous response to the crisis experienced, causing a person or group of people to carry out several activities as a means of livelihood.

Regarding strategies for obtaining jobs as an effort for Livelihood Diversification, it is relatively same between 2014 and 2024. The most strategies that used during a decade is own efforts, friendship, entrepreneurs and being informed by family. For example, in friendship, urban people believe that by building good relationships with the people around them, they receive the information and job opportunities. Good relationships and trust between former employers, friends and relatives are capital for households to look for and get the work.

Strategies for getting jobs for urban people in this study were presented in Figure 6.

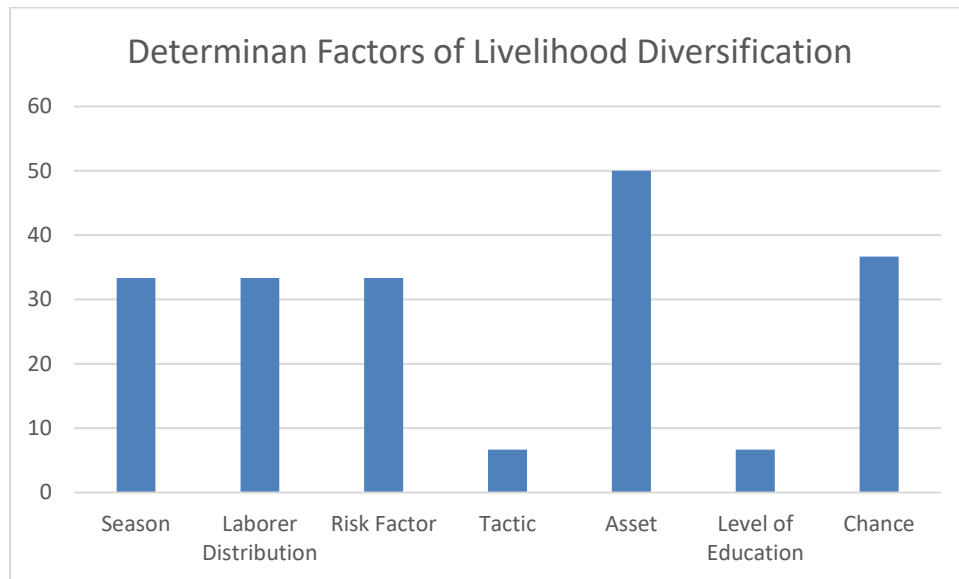


**Figure 6. Strategy for Obtaining Job**  
Source: Primary Data, 2014

Another strategy was that the people itself quite active in seeking a number of economic activities that generate income. This was because the household had the skills to do a certain job and intended to ask for work. (Emeru et al., 2022) conducted a study in the North Shewa Zone, stating that the determinants of household livelihood diversification strategies in urban areas were the age of the head of the family, level of education, family, access to credit, access to markets, as well as training and other services. (Chambers & Conway, 1992) also stated that one of the important aspects of livelihoods was ability, namely being able to find and take advantage of opportunities and being proactive and able to adapt dynamically. Other research results also showed that some households got a number of jobs because there was a certain opportunity or momentum. For example, during legislative and presidential elections, several respondents were involved as witnesses or on the organizing committee for legislative and presidential elections. Apart from that, during the momentum of a championship in one of the sports, there were people involved as players or as referees in the competition.

The determining factor for residents to diversify their livelihoods was the presence of assets and chances. This was because assets were personal property; assets could be used freely

for living. Meanwhile the chance factor was caused by information from friends or relatives about a job. Factors determining the livelihood diversification were shown in Table 5.



**Figure 7. Determinant Factors of Livelihood Diversification**  
Source : Primary Data, 2014

Risk factor became a determinant factor because of income factor. When urban people did the high risk job; they would obtain the high income. In this study, the risk experienced by people was suffering from back pain or pinched nerves. This happened because they worked as dockworkers carrying loads on their backs from the ship to the storage warehouse without using tools. Families choosing to do a job for getting the high income usually had a large number of family members. However, there were some families prefer to do a job with a low income, after that they could take a rest. Seasonal factors were common among residents who worked as fishermen. When the weather was choppy and windy they looked for the other works such as the construction workers to earn income.

### **Sustainability of Livelihood Diversification**

A livelihood could be sustainable when it could overcome stress and shocks and manage the assets for future life, besides that, it also considered environmental and social aspects (Chambers & Conway, 1992). Residents charring out the activities in the agricultural sector (On-Farm) such as gardening on other people's vacant land and pig farming activities in the back yard of house were unsustainable livelihood. This was because the access of residents to agricultural land was very limited. Moreover, the owners of the vacant land could take it any time. As for the pig farming, it took the high costs for feeding the pigs. Further, the negative externalities that arise are environmental pollution such as waste and the smell of livestock waste to surrounding neighbors. Residents working as fishermen could be sustainable provided that residents received capital for modern fishing equipment and assistance to increase the added value of fish.

Residents who carry out activities related to agriculture (Off-Farm) such as selling areca nut and vegetables can be sustainable if they looked for alternative sales locations outside residential areas and received business capital guidance and assistance in managing capital. Regarding new settlements, (Amiroh et al., 2021) explained that there were improvements to residential areas on the coast in Karangsari Urban Village. Most of the residents who carried out selling activities were women. They have experiences to sell vegetables and fruits in the

traditional market near their old settlement, before being moved to the new settlement. The aim of mothers in selling activities is to help their husbands fulfill their needs at home.

Residents' livelihoods outside of agriculture (non-farm) include construction workers; docker; and motorcycle taxis could be sustainable under the certain circumstance for residents who are still of productive age. Residents' assets or capital such as natural capital, human capital and physical capital might not be able to support the sustainability of residents' livelihoods in new settlement locations. (Su, Fang, et al., 2021) found a significant relationship between poverty alleviation methods and natural and social capital for sustainable livelihoods where natural capital had a negative impact on the ability of sustainable livelihoods because it possible hampered by the scarcity of natural resources and various forms of natural disasters in rural areas, thereby reducing its effectiveness in improving livelihoods. On the other hand, social capital has the greatest variation among livelihood capital due to the variety of social ties and networks in society, which results in various implications for the potential for sustainable livelihoods. Apart from that, (Amiroh et al., 2021) who researched residents who live in residential areas in Karangsari Village, Tuban, stated that the five types of capital they have are unlikely to contribute much to supporting the sustainability of residents' livelihoods as fishermen. after residents changed their motivation by improving facilities in the area. Settlements such as building closed gutters, providing roads for pedestrians and need to be involved in community service activities to organize a better environment and be involved in other social institutions.

## **CONCLUSION**

The findings of this study indicate that the strategy employed by residents to diversify agriculture in new settlement locations involves utilizing the assets they own and fostering strong friendships or relationships among residents. It can be concluded that the most sustainable livelihoods for residents are informal jobs outside the agricultural sector. It is recommended that residents working as port laborers become members of a savings and loan cooperative, as this would enable them to utilize savings and loan services to meet their needs, particularly in unexpected situations. Additionally, individuals with limited educational attainment should be provided with technical guidance on micro and small enterprises, as these can serve as potential sources of livelihood for those residing in urban areas. The government recognizes that urban communities have diversified their livelihoods as a means of self-empowerment. A limitation of this study is that it only assesses the sustainability of livelihoods in terms of the negative externalities arising from activities carried out by residents in the residential environment. Consequently, future studies should aim to examine the statistical relationship between livelihood sustainability and social and environmental conditions, as well as the connection between livelihood strategies and the resilience of residents in facing crises or pressures in urban areas.

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