

## Adaptation Strategy of Migrant Crew on Taiwanese Fishing Vessels

Nur Cholik Widyan Saputra<sup>1\*</sup>, Margaretha Hanita<sup>2</sup>

Universitas Indonesia Depok, Indonesia

Email: [nurcholik.ws@gmail.com](mailto:nurcholik.ws@gmail.com)<sup>1\*</sup>, [margaretha.hanita@ui.ac.id](mailto:margaretha.hanita@ui.ac.id)<sup>2</sup>

\*Correspondence

### ABSTRACT

**Keywords:** Crew Of The Ship, Migrant Workers, Resilience, Adaptation.

This study aims to analyze the adaptation strategies used by migrant crew members on Taiwanese fishing vessels in facing the risks they face. The research's risks include heavy workloads, hazardous work environments, health, and forced labor exploitation. The research method used is a qualitative analysis using primary data from interviews with seven resource persons who are migrant crew members on Taiwanese fishing boats. The study results show that migrant crew members use various adaptation strategies to deal with the risks they face on fishing boats. These adaptation strategies include a more effective division of labor, the use of better technology or equipment to reduce physical burdens, joining a community of fellow migrant workers, and the fight for decent work rights. In addition, migrant crew members also use an adaptation strategy from the beginning of recruitment by choosing the departure process through the official route. This research makes an essential contribution to understanding how migrant crew members cope with the risks they face on Taiwanese fishing vessels. The practical implications of this study are the importance of paying attention to the welfare and work rights of migrant crew members and expanding understanding of the importance of adaptation strategies in increasing their resilience in often challenging and high-risk work environments.



### Introduction

The presence of Indonesian crew members on Taiwanese fishing vessels has become a striking phenomenon in recent years. Indonesia is one of the largest suppliers of labor to Taiwan's fishing industry, with thousands of crew members sailing to sea every year (Aburn, Gott, & Hoare, 2016). This increase in the number of migrant crew members from Indonesia highlights the importance of understanding the challenges faced in living life on Taiwanese fishing boats (Bergman, Cummings, & Warmuth, 2016). Although they leave their homeland in the hope of finding a better livelihood, the reality is that migrant

crew members in Taiwan often face serious problems and risks (Isaacs, Roman, & Savahl, 2019).

Various problems afflict migrant crew members on Taiwanese fishing boats, covering a broad spectrum ranging from exploitation to inhumane working conditions. The exploitation of migrant crew members, whether in the form of excessive working hours, unreasonable wages, or physical and verbal abuse, is often a reflection of the inequality of power between employers and workers (Maurović, Liebenberg, & Ferić, 2020). Working conditions on Taiwanese fishing vessels are also known to be extremely dangerous, with migrant crew members exposed to various risks such as work accidents, physical injuries, and even death. Amid harsh working conditions and isolated environments, migrant crew members often have difficulty obtaining assistance or reporting violations they experience (Doyle et al., 2016).

Although many studies have been conducted to solve the problem of migrant crew members in Taiwan, most of the research tends to focus on macro aspects and government policies (Park et al., 2021). Existing research tends to highlight issues from a structural and policy point of view, with little attention paid to solutions that can be applied directly at the individual or group level of migrant workers (Henry, Sheffield Morris, & Harrist, 2015). The Taiwanese government's efforts to improve the protection of the rights of migrant crew members through policies and regulations are also limited in addressing this problem comprehensively (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014).

Therefore, there is an urgent need to examine the solution to the problem of migrant crew members from a micro perspective, especially in the context of improving their resilience and well-being directly on Taiwanese fishing vessels (Wu et al., 2013). By understanding the factors affecting the strength of migrant crew members and identifying effective strategies to improve their conditions, we can reduce the risks faced by migrant crew members and create a safer and more humane working environment for them. This study aims to investigate in depth the resilience of migrant crew members on Taiwanese fishing vessels, as well as formulate policy recommendations and practical interventions to improve their well-being in the long term.

## **Method**

Qualitative research methods will be used to collect data relevant to this study. This approach allows researchers to gain an in-depth understanding of the experiences and perspectives of migrant crew members on Taiwanese fishing vessels related to their resilience strategies. This research will involve in-depth interviews with seven resource persons who are migrant crew members on Taiwanese fishing boats. The selection of resource persons was carried out using the snowball sampling technique, which allowed the researcher to identify potential resource persons through the social network of those already involved in the research. The selected resource persons are crew members who have had previous experience as migrant crew members on Taiwanese fishing boats, with priority given to those who are taking care of passports for the second, third, or subsequent

departures. The snowball sampling technique is carried out by asking for the recommendations of resource persons to participants who are already involved in the research, thus allowing the identification of additional resource persons with relevant experience and insights.

Data will be collected through individual interviews with each interviewee, which will be conducted with structured interview guidelines to ensure consistency and completeness of the data. Data collection will be carried out by paying attention to the principles of research ethics, including the confidentiality and security of information submitted by the resource persons. Data analysis will be carried out descriptively by examining the patterns of findings that emerge from the interviews. The data will be coded to identify the main themes, patterns, and relationships between the various concepts that arise from the data. Descriptive analysis and coding will allow researchers to explain and understand migrant crew resilience strategies in more detail.

## Results and Discussion

### Social Demography of Resource Persons

This study interviewed seven resource persons who worked as crew members on Taiwanese fishing boats. All speakers are men. The age of the speakers varied from 24 to 42 years old. The average age of the resource persons was 32 years old. My experience working as a fishing boat crew member in Taiwan varies from 2 years to 11 years. The types of boats used by the resource persons also varied, namely squid boats (1 person), layur boats (1 person), badong boats (2 people), trawl boats (1 person), and fishing boats (2 people). Most speakers are married (6 people), and the rest (1 person) are not.

**Table 1**  
**Demographic Data of Resource Persons**

No	Initial Name	Age	Asal	I spent a long time in Taiwan	Types of Fishing Vessels
1	IS	42	Gebang	11 Years	Trawl Ship
2	JN	40	Cirebon	5 Years	Ship Badong (Kepiting)
3	TS	33	Pemalang	2 Years	Fishing Boats
4	AG	35	Tegal	6 Years	Ship Badong (Kepiting)
5	GN	27	Cirebon	6 Years	Fishing Boats
6	TO	24	Cilacap	2 Years	Kapal Layur
7	SK	29	Indramayu	5 Years	Squid Ship

### Risks Faced by Migrant Crew Members

Migrant crew members working on Taiwanese fishing vessels face a range of significant risks that can affect their well-being and safety in a harsh and high-risk work environment. First, risks related to difficult working conditions are one of the main challenges for migrant crew members. They are often exposed to long working hours and strenuous physical tasks, such as catching and processing fish, unloading, or maintaining boat equipment. This high workload can lead to significant physical fatigue and increase the risk of work injuries such as muscle, bone, or joint injuries. Second, safety and health are essential concerns for migrant crew members. The working environment at sea can

be high-risk, with the potential for ship accidents, work accidents, or exposure to hazardous chemicals. In addition, poor weather conditions at sea can also endanger the safety of migrant crew members, especially when carrying out tasks on the ship's deck. The long-term impact of this exposure can negatively impact the physical and mental health of migrant crew members, as well as affect their overall quality of life.

In addition to physical risks, social isolation is also a significant problem for migrant crew members on Taiwanese fishing boats. They are often separated from their family, friends, and society during long periods at sea. This isolation can lead to mental health problems such as depression, anxiety, or psychological stress. Limited access to social support and mental health services in the middle of the ocean can also exacerbate the impact of this social isolation. Third, the risk of exploitation and human rights violations is also a severe concern for migrant crew members. Some crew members may face unfair working conditions, including forced labor, physical or verbal abuse, or injustice in paying wages or working conditions. In addition, there is also a risk of sexual exploitation or human trafficking that can threaten the safety and welfare of migrant crew members on fishing vessels.

Fourth, legal and legal issues are additional risk factors that migrant crew members must face. Unclear or unfair employment contracts, as well as uncertainty of immigration status, can increase their vulnerability to exploitation or human rights violations. In addition, limited access to the justice system or legal aid can also make it difficult for migrant crew members to pursue their rights or obtain proper legal protection. Finally, risks related to climate change and environmental conditions must also be considered. Climate change can increase the intensity of severe weather, such as hurricanes or high waves, which can jeopardize the safety of the ship and crew on board. Exposure to toxic waste or marine pollution can also hurt the physical and ecological health of migrant crew members and sustainable marine resources. As such, a deep understanding of these risks is critical in designing intervention strategies to improve the well-being, safety, and resilience of migrant crew members on Taiwanese fishing vessels.

### **Protection Factors Owned by Migrant Crew Members**

In overcoming the risks and challenges that come with it, various protection factors can increase the likelihood of migrant crew members working on Taiwanese fishing vessels to remain strong and adapt positively. One of the most critical protection factors is social support. Social support provided by fellow crew members, family, friends, or co-workers on board can provide significant emotional, practical, and informational resources for migrant crew members. This support can be in the form of emotional support in the form of moral, moral, passionate, or friendship support, as well as practical support in the form of help in completing tasks or overcoming daily problems. In addition, social support can also provide access to helpful information or advice in dealing with difficult situations. By having strong social support, migrant crew members can feel more supported and emotionally connected, which can help them cope with the stress and pressure they may face on board.

In addition to social support, practical coping skills are an essential protection factor for migrant crew members. Coping skills refer to an individual's ability to manage stress, overcome challenges, and adjust to changes in the environment or difficult situations. This includes strategies such as problem-solving, emotional regulation, or seeking support when needed. By having good coping skills, migrant crew members can cope with stress or problems more effectively, reduce the negative impact on their well-being, and maintain a high level of functioning in a high-risk work environment.

In addition, good adaptability is also a critical protection factor for migrant crew members. The ability to adapt quickly and flexibly to changes in working conditions or assigned tasks can help them stay effective and productive on Taiwanese fishing vessels. Good adaptation allows migrant crew members to continue to function optimally in the face of changing situations at sea. It reduces the risk of stress or tension due to uncertainty or environmental changes.

In addition, the mastery of knowledge and skills related to working on fishing boats can also be a significant protection factor for migrant crew members. Migrant crew members with good knowledge and skills related to their work tasks have an advantage in overcoming challenges or risks they may face on board. Mastering the necessary knowledge and skills increases their efficiency and productivity and can reduce the risk of injury or failure in carrying out their duties.

Finally, access to support resources such as health services, legal aid, or social services is also a critical protection factor for migrant crew members. Access to these resources can help them overcome any problems or crises that may arise in their work environment and provide the protection and support needed in difficult situations. By having access to adequate support resources, migrant crew members can feel safer and supported, which in turn can assist them in maintaining well-being and resilience on Taiwanese fishing vessels. Thus, these protective factors are essential in helping migrant crew members remain resilient and adaptive in harsh and high-risk work environments.

### **Vulnerabilities in Migrant Crew Members**

Migrant crew members on Taiwanese fishing vessels face a variety of vulnerabilities that affect their well-being and safety in a harsh and high-risk work environment. First, vulnerability to physical health is a significant concern for migrant crew members. They are exposed to harsh working conditions and marine environments, which can increase the risk of bodily injury due to work accidents or discomfort caused by prolonged exposure to environmental elements such as extreme temperatures or severe weather at sea. Physical injuries such as burns, cuts, or back injuries often occur as a result of strenuous physical tasks such as catching and processing fish, unloading, or caring for boat equipment. Second, vulnerability to mental health is a severe concern for migrant crew members. An isolated work environment, high work pressure, and uncertainty of working conditions can increase the risk of mental health problems such as depression, anxiety, or psychological stress in migrant crew members. Social isolation and the inability to access adequate mental health services on board can also exacerbate this vulnerability.

Furthermore, vulnerability to exploitation and human rights violations are also significant concerns. Migrant crew members can be vulnerable to exploitation and human rights violations such as forced labor, physical or verbal abuse, or injustice in the payment of wages or working conditions. Some crew members may even experience human trafficking or situations that are close to modern slavery. Their inability to obtain adequate legal protection or access relief services can leave them vulnerable to adverse exploitation and challenging to escape from a situation of concern. Third, vulnerability to social isolation is a significant problem. Migrant crew members often experience social isolation due to being separated from their families, friends, and communities during long periods at sea. This isolation can lead to feelings of loneliness, depression, or anxiety, as well as increase the risk of mental health problems and overall emotional well-being.

Fourth, vulnerability to legal and legal issues is an additional risk factor that migrant crew members must face. Unclear employment contracts, uncertainty of immigration status, or limited access to the justice system can increase the vulnerability of migrant crew members to legal and legal issues. They may need help in asserting their rights or obtaining proper legal protection in difficult situations or conflicts that arise in the workplace. Finally, migrant crew members can also experience vulnerability to economic problems, including low wages, high debt, or job uncertainty. Difficulties in generating sufficient income or managing their finances can make them vulnerable to poverty, financial instability, or exploitation by unscrupulous parties. Thus, understanding these vulnerabilities is critical in designing intervention strategies to improve the welfare, safety, and resilience of migrant crew on Taiwanese fishing vessels.

### **Adaptation Strategy for Migrant Crew Members**

In this study, we conducted an in-depth analysis of the adaptation strategies used by Taiwanese migrant crew members to deal with the risks they face on fishing boats. The study focused on four main risks: heavy workloads, a dangerous work environment, health risks, and forced labor exploitation.

First, the risk of heavy workloads is one of the main challenges faced by migrant crew members. The indicators include long working hours, heavy physical tasks, damaged ship conditions, and minimal rest facilities. In the face of these risks, migrant crew members tend to use adaptation strategies such as more effective division of labor, the use of better technology or equipment to reduce physical burden, and striving to fight for their rights regarding working hours and decent working conditions.

Second, the risk of a dangerous work environment is also a severe concern in this study. Indicators include marine disasters such as extreme weather and large wave storms, poor ship conditions, and lack of health facilities and safety equipment. To address these risks, migrant crew members can use adaptation strategies such as increasing awareness of weather conditions and the marine environment, strengthening safety knowledge and skills, and actively participating in emergency training and simulations (Zautra, Arewasikporn, & Davis, 2010).

Third, health risks are also an essential concern in this study. The indicators include the need for more health facilities, limited food resources, shabby bedroom conditions,

poor ventilation, bad weather, and social isolation due to being far from family. Migrant crew members can use adaptation strategies such as maintaining personal hygiene and the work environment, maintaining a healthy diet, and sharing experiences and support with fellow migrant crew members to cope with stress and social isolation.

Fourth, the risk of forced labor exploitation is a severe issue in this study. Indicators include working more than the regulated working hours, being forced to work continuously, and being threatened with verbal and physical violence. To deal with these risks, migrant crew members must use adaptation strategies such as forming solidarity and unity among fellow migrant crew members, reporting exploitation practices to the authorities, and seeking help from institutions or organizations that care about workers' rights.

**Table 2**  
**Risk Analysis, Protection, Vulnerability, and Adaptation Strategies of Migrant Crew on Taiwanese Fishing Vessels**

No	Risk	Protection Factor	Vulnerability	Adaptation Strategies
1	Heavy Workload:- Long Working Hours - Heavy Physical Tasks (Fishing, Processing Fish, Preparing Nets And Fishing Gear, Loading And Unloading, Maintaining The Boat, Cleaning The Ship's Propellers) - Fishing Gear Is Damaged - Lack Of Facilities For Rest	1. Setting A Balanced Work Schedule And Getting Enough Rest 2. Supervision Of Working Conditions By Management - Training On Safe And Ergonomic Working Techniques	1. Imbalance Between Workload And Downtime 2. Lack Of Support From Management In Maintaining Work-Life Balance 3. Lack Of Appropriate Equipment Or Facilities To Reduce The Risk Of Injury - Lack Of Understanding Of Engineering Kerja Yang Aman	1. Ensuring A Rotation Of Work Schedules That Allows For Adequate Rest And Recovery 2. Prioritizing Personal Health And Well-Being Outside Of Working Hours - Ensure The Use Of Ergonomic Work Techniques And The Use Of Appropriate Aids To Reduce Physical Load

			- Sleep Disorders Or Irregular Sleep Patterns	
2	Hazardous Work Environment: - Marine Disasters (Storms, Large Waves, Extreme Weather) - Poor Condition Of The Ship (Leaks, Worn Engines, Shabby, Cramped Bedrooms, Poor Ventilation) - Minimal Health Facilities On Board - Broken Fishing Gear - Inadequate Safety Equipment (To Prevent Fire And Explosion)	- Quality Occupational Safety Training - Supervision Of Working Conditions By Management - Use Of Appropriate Safety Equipment	- Extreme Weather Conditions And Rapid Weather Changes - Potentially Hazardous Sea Conditions - Lack Of Access To Sanitation Equipment - Lack Of Understanding Of Safe Working Techniques	- Ensure That All Work Safety Equipment Is Available And In Good Working Order - Conduct Regular Training On Emergency Measures On Board - Conduct Regular Inspections Of Safety Conditions On Board
3	Health: - Minimal Health Facilities On Board - Limited Food Resources - Shabby Bedrooms, Poor Ventilation - Heavy Workloads, Long Working Hours - Extreme Weather - Social Isolation (Away From Family, Friends, and Community),	- Knowledge Of Marine Diseases And Their Prevention - Education And Training On Health And Hygiene	- Stress And Fatigue Due To A Harsh Work Environment - Limited Access To Health Information	- Using Protective Equipment - Strive To Set A Balanced Work Schedule Between Work Time And Rest Time - Implementing Stress Management Strategies - Ensures A Healthy Diet - Strive To Maintain A Regular And Quality Sleep Pattern



---

	Shabby Bedrooms, Poor Ventilation - Heavy Workloads, Long Working Hours - Extreme Weather - Social Isolation (Away From Family, Friends, Community)				
4	Exploitation And Forced Labor:  - Work Beyond Contract - Forced To Work Continuously - Threatened With Verbal Or Physical Violence	- Social Support From Fellow Crew Members And Families  - Good Supervision And Protection On Board  - Access To Social And Legal Protection Services	- Economic Limitations  - Social Isolation Because It Is In The Middle Of The Sea, So Far From Supervision Illegal Employment Status	1.          2.          3.	Choosing A Reputable Distributor PT Establishing A Support Network Between Crew Members Increasing Knowledge Of Employment Rights And Protection  - Follow The Official Path

---

Based on the results of interviews with the speakers, information was obtained that there are two types of work on Taiwanese fishing vessels based on the validity of departure procedures: official procedures (legal) and unofficial procedures (illegal). Migrant crew members usually refer to those who work through official procedures as Local ABK / Local Job / Local Ship, while those who work through unofficial procedures are called LG ABK / LG Job / LG Ship. Local ABKs, usually also called ABK-Official, work in Taiwan by following official procedures; their salary is paid in NTD (New Taiwan Dollar), and they have an ARC (Alien Resident Certificate) and Askes. The placement of Local Crew members is regulated in the P to P scheme (between PT in Indonesia and Taiwan Agency). Meanwhile, LG crew members are crew members who work non-procedurally using a letter of guarantee, sail in international waters on Taiwanese-flagged ships, generally depart using a visit visa, are not registered with the Ministry of Manpower, BP2M1, KDEI in Taipei or the Taiwanese government, low salary, vulnerable to exploitation, and no guarantee of workers' rights. The placement procedure for LG crew members is not according to regulations in Indonesia related to

the placement and protection of migrant workers abroad. Their placement is only from a work contract and is usually only signed by the crew and the ship owner without an endorsement from the Indonesian Representative.

The speakers explained that the stress levels faced by Local ABK and LG ABK are very different. Working conditions, working hours, time the ship sails at sea, protection of crew rights and salaries received, and salary payment mechanisms are very different. The resource person with the initials JN, who has been working as a crew member in Taiwan for six years, explained. "For months, most of the LG ships. Suppose I can not come to Taiwan if I get a job on an LG ship. Indeed, the cost is free, the departure process is easy and fast, and the salary is paid cheaply. The risk, *naudzubillahimindalik*, if there is an accident, you can't get insurance; it's different if it's official if we have an accident and there is a disaster, we can apply for insurance, you can. Then, if LG doesn't hold a salary, the salary is directly transferred to the family. The one who receives the salary is the family at home. If it is official, the salary will be received directly from us. So if you can, don't join the LG ship; at sea, it can be months."

JN added that if you choose a local ship job, the maximum time to go to sea is 20 days. "If you join a local ship, a squid boat, for example, a maximum of 20 days at sea. I am a badong boat, to look for crabs, usually four days at sea. But if my summer is 10-15 days at sea, it used to be 20 days at most. Landing is a 5-day holiday. I just left again. But if there is much unemployment in winter, at most, go to the sea for four days, and then there is a week of unemployment because the weather is not friendly. For example, if there is a typhoon, the employer is reportedly told to go home from the ship. If you don't go home, your employer will even find you. Indeed, a thumbs up for Taiwan, obeying the law, is yes if you use an official or a local ship."

Overall, this study's results show that Taiwanese migrant crew members use various adaptation strategies to deal with the risks they face on fishing vessels. Although the working conditions and work environment are often challenging, with awareness of risks and efforts to adapt, migrant crew members can strengthen their resilience and improve their workplace well-being.

## **Conclusion**

First of all, the risks faced by migrant crew members on Taiwanese fishing vessels are highly varied and complex. These risks include heavy workloads, hazardous work environments, health problems, and forced labor exploitation. The heavy workload is mainly seen from the long working hours, heavy physical tasks, and the lack of rest facilities. Dangerous working environments include unpredictable sea conditions and a need for more health facilities. Health issues are also a significant concern, with limited access to proper medical care and a work environment that may threaten the physical and mental health of migrant crew members.

Second, migrant crew members use various adaptation strategies to overcome these risks. These strategies include a more effective division of labor, the better use of technology or equipment to reduce physical burdens, and the fight for decent work rights.

An essential adaptation strategy is choosing an official route at the beginning of departure. The official channel provides more apparent legal protection and working rights for migrant crew members and guarantees better facilities and working conditions on Taiwanese fishing vessels. However, despite the various adaptation strategies that have been carried out, the challenges faced by migrant crew members remain significant. Therefore, further efforts are needed to raise awareness of the importance of the welfare and employment rights of migrant crew members, as well as strengthen their protection of them in often challenging and high-risk work environments. Through a better understanding of risks and effective adaptation strategies, it is hoped that a safer, healthier, and fairer work environment can be created for migrant crew members in the future.

## Bibliography

- Auburn, Gemma, Gott, Merryn, & Hoare, Karen. (2016). What is resilience? An integrative review of the empirical literature. *Journal of Advanced Nursing*, 72(5), 980–1000.
- Bergman, Kathleen N., Cummings, E. Mark, & Warmuth, Kelly A. (2016). The benefits of marital conflict. *Contexts for Young Child Flourishing: Evolution, Family, and Society*, 233–245.
- Doyle, Niamh, MacLachlan, Malcolm, Fraser, Alistair, Stilz, Ralf, Lismont, Karlien, Cox, Henriette, & McVeigh, Joanne. (2016). Resilience and well-being amongst seafarers: a cross-sectional study of crew across 51 ships. *International Archives of Occupational and Environmental Health*, 89, 199–209.
- Henry, Carolyn S., Sheffield Morris, Amanda, & Harrist, Amanda W. (2015). Family resilience: Moving into the third wave. *Family Relations*, 64(1), 22–43.
- Isaacs, Serena Ann, Roman, Nicolette V, & Savahl, Shazly. (2019). An exploration of the family resilience needs of a rural community in South Africa: A sequential explanatory mixed methodological study design. *Current Psychology*, 38(6), 1634–1648.
- Maurović, Ivana, Liebenberg, Linda, & Ferić, Martina. (2020). A review of family resilience: Understanding the concept and operationalization challenges to inform research and practice. *Child Care in Practice*, 26(4), 337–357.
- Park, Elyse R., Luberto, Christina M., Chad-Friedman, Emma, Traeger, Lara, Hall, Daniel L., Perez, Giselle K., Goshe, Brett, Vranceanu, Ana Maria, Baim, Margaret, & Denninger, John W. (2021). A comprehensive resiliency framework: Theoretical model, treatment, and evaluation. *Global Advances in Health and Medicine*, 10, 21649561211000304.
- Southwick, Steven M., Bonanno, George A., Masten, Ann S., Panter-Brick, Catherine, & Yehuda, Rachel. (2014). Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European Journal of Psychotraumatology*, 5(1), 25338.
- Wu, Gang, Feder, Adriana, Cohen, Hagit, Kim, Joanna J., Calderon, Solara, Charney, Dennis S., & Mathé, Aleksander A. (2013). Understanding resilience. *Frontiers in Behavioral Neuroscience*, 7, 10.
- Zautra, Alex J., Arewasikporn, Anne, & Davis, Mary C. (2010). Resilience: Promoting well-being through recovery, sustainability, and growth. *Research in Human Development*, 7(3), 221–238. <https://doi.org/10.1080/15427609.2010.504431>