

Economic Reconversion in the Zem Industry to improve Zem Operators' Socio-economic Well-being, in Cotonou, Benin.

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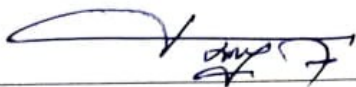
**Tangaza University College
Catholic University of Eastern Africa**

December 2022

STUDENT'S DECLARATION

I, the undersigned, declared that this thesis is my original work and is not the result of anything done in collaboration. It has not been previously presented to any other institution. All sources have been appropriately cited and duly acknowledged in full.

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We certify that this thesis is an original piece of work. It fulfils all requirements. It is submitted to the Institute for Social Transformation in Tangaza University, the Catholic University of Eastern Africa, with our approval.

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DEDICATION

This thesis is dedicated, foremost, to the leadership of the current Superior General of the Institute of the Brothers of the Sacred Heart, Brother Mark Hilton. It extends deep respect to the Province of Eastern and Southern Africa, with special mention to the International Scholasticate in Nairobi, Kenya, and the Province of West Africa, along with our entire Institute-Family of the Brothers of the Sacred Heart. All the Brothers who shaped my first steps, as well as our pioneers, Brothers Polycarp, Xavier, Norbert, and all the others, and especially our Founder Father André Coindre, have all served as inspiration and motivation in this journey intended to enable me to carry out our charism to transform the lives of the youth and children who are poor and without hope, with a greater, more profound, and far-reaching social impact.

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the power to be catalysts for progressive change that touches hearts and transforms lives through the noble charism we inherited from our founder, Father André Coindre, approaching our tasks with unwavering hope and striving to create a better future for all.

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ABSTRACT

The informal motorcycle transport sector plays an essential (pivotal) role in the economy of developing nations. In Benin, where the sector of motorcycle transport locally known as Zemidjan or Zem accounts for 75% of transport services, providing livelihoods for about 90% of informal workers, many such supply-side workers still face significant socio-economic hardships that undermine their overall quality of life. This study examined economic reconversion approach aiming at facilitating social transformation by broadening occupational choices and resilience for informal workers, in order to reshape life trajectories of Zem operators, in Cotonou (Benin). Anchored in a pragmatic philosophical paradigm, a concurrent mixed methods design was employed with a survey (N=420) using simple random sampling and semi-structured interviews (N=15 key informants), informed by the theoretical frameworks of contestable markets, mechanism design, and developmental interventions. Five objectives investigated the influence of market entry into Zem business, education level, existing regulations, finance access, and willingness for reconversion, on operators' socio-economic well-being. The quantitative data were analysed using descriptive statistics and regression analysis, while thematic analysis was conducted for qualitative data. Results found ease of entry negatively influenced income ($\beta = -.477$, $p < .05$). Higher education positively impacted well-being ($\beta = .105$, $p < .05$). Regulations showed a negative association ($\beta = -.134$, $p < .05$) while finance access correlated positively ($\beta = .377$, $p < .05$). Quantitatively speaking, the results revealed mixed reactions regarding occupational reconversion among Zem operators. A substantial majority (84.6%) expressed their willingness to transition, with driving motives including dissatisfaction, health problems, work-life balance, and economic uncertainties, notably with regard to retirement benefits. On the flip side, a minority (15.4%) were either indifferent or had explicitly expressed their intention to continue working as Zem service providers. The study recommends human capital development programs to equip Zem operators with marketable skills. It stresses the implementation of sound economic policies to improve microcredit schemes and access to finance, as well as the creation of stable and enabling business environment, free from excessive taxes and regulations. Furthermore, national and local political bodies should explore viable job opportunities in sectors currently under-optimised. The implication for policymakers is to create operational frameworks that provide for intra- and extra-sector economic reconversion, geared towards improving income levels and diversifying occupational opportunities.

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ACRONYMS

BWI	Bretton Wood Institutions
WB	World Bank
IMF	International Monetary fund
ILO	International Labour Organization
SEW	Socio-Economic Well-being
ZOSEW	Zem operators SEW
NGO	Non-Governmental Organization
NEIO	New Empirical Industrial Organisation
OECD	Organization of Economic Cooperation and Development
SAP	Structural Adjustment Programme
SDG	Sustainable Development Goals
UNDP	United Nation Development Programme
SME	Small and Medium Enterprises
WHO	World Health Organization
ZO	Zem Operator
ZEA	Zem Economic Activity
CSM	Common Social Minimum
CMT	Contestable Market Theory
MDT	Mechanism Design Theory
SACCO	Savings and Credit Cooperative
UNSDG	United Nations Sustainable Development Goals
UNESCO	United Nations Education, Scientific and Cultural Organisation
INSAE	Institut National de Statistiques et d'Analyses Economiques (Benin National Institute of Statistics and Economic Analysis)

OPERATIONAL DEFINITION OF TERMS

Zemidjan (or Zem)

Zémidjan, in "Fon", the dominant local language in Benin, translates to "take me quickly" to my destination, and this phrase has not only lent its name to the motorbike cab service but is also commonly used to refer to the motorbike cab riders refers in this Document as "**Zem Operator**" (ZO). The contracted form, "Zem," which signifies "take me," is prevalent throughout this document.

Economic Reconversion

In the face of rapid and unpredictable changes in the world of work, workers in the Zem industry must adapt to cope with the growing risk of mismatch between their skills and the demands of the job. In the context of this study, this adaptation is referred to as economic reconversion. Thus, ZO reconversion involves the acquisition of marketable skills, the enhancement of work capacity, and the development of occupational change. Ultimately, the purpose of economic reconversion in this study is to bring about a social and organizational transformation that enables ZOs to make alternative decisions in response to socioeconomic shocks, job insecurity, and the potential risk of poverty in their later years.

Ease of Entry refers to the affordability in starting and sustaining Zem service operation

Free Exit refers to the level of barriers to exit the Zem industry. For example, a Zem operator would be reluctant to enter the industry if he must spend a lot of money that he cannot get back should he exit from the sector.

Informal Transport is the transport system which provides transport services to passengers with minimal organization structures, flexible fares, schedules, and routes.

Zem Industry refers to the grouping of Zem operators in the motorcycle transport sector in Cotonou, who share the same characteristics, such as similar main activity and sources of income.

Zem Market Structure refers to the characteristic of the Zem transport market in terms of the number of operators, the similarity of the service provided, and ease of entry and exit from the market.

Sunk Costs: refers to the loss that a Zem operator would incur if he cannot convene his motorbike for use in another productive activity or sell them in a second-hand market.

Hit and Run: It refers to the temporary and free interruptions on the market of illegal operators, often consisting of civil servants, students, and others, who just come to reap some instant cash and then exit.

Regulatory Policy: These are regulations designed by the government to impose controls and restrictions or favour business

Access to Finance (credit)

Access to finance implies the ability of ZOs to obtain financial services including credit from financial institutions. However, access to finance seems broader and challenging to measure. Therefore, in line with the ZOs' life experience and understanding about access to finance, access to credit has been adopted and used interchangeably with access to finance to mean in this study, the ability of ZOs to access loans and other financial facilities. Regarding the terminology "access", this refers to the absence or low level of costs and other constraints in the process of obtaining the financial facilities.

Well-being

Well-being refers to a sense of personal fulfillment that is not necessarily linked to material possessions. Instead, it can be linked to other factors, such as good health, or also to collective or shared understanding and sustainability, such as positive interpersonal relationships in society. The well-being of Zem operators reflects the satisfaction they experience in relation to their quality of life.

Socio-economic well-being:

Traditionally, well-being was viewed in terms of material possessions, wealth or income. But since some elements of quality of life cannot be measured solely in monetary values, socio-economic well-being refers, in addition to income and finances, to the ability to express the highest level of life satisfaction, such as good health, employment opportunities, housing, children's education, old age provision, family life, leisure, participation in cultural and political activities, access to services and facilities available in the community as to promote a healthy and peaceful living environment, etc. These are essential factors in Zem operators' level of satisfaction in terms of socioeconomic well-being, though this concept encompasses all aspects of human life as a multidimensional concept.

Market-induced reconversion

The transformation in the Zem industry could lead to a complete overhaul of the sector that would benefit ZOs in terms of income. However, an emergence of new employment opportunities that offer greater job satisfaction could prompt ZOs to leave the sector, leading to a shift to other alternatives. Conversely, if revenues from Zem increase significantly, operators may return to the sector, reversing the trend. These changes in the career trajectories of ZOs, driven by market forces, are considered in this study to be market-induced reconversion.

State mediated reconversion

It appears that market forces could be controlled by the government to ensure an equilibrium that would improve the living conditions of citizens, with a chance of downsizing Zem industry, therefore the negative externalities associated with zem activity in Cotonou. This intervention would fall within the framework of state mediation, hence a state-mediated reconversion.

Occupational Reconversion

The insecure and unpredictable nature of the world of work, particularly in the informal market, as well as quick changes in working life, etc., create new needs for adjustment among workers to protect against the risks of person-job misfit and premature exit from working life. Active measures to preserve or promote person-job fit, health, work capacity, motivation, and qualification for job seek, are part of occupational reconversion. As for Zem operators, lack of opportunities, need for personal fulfilment, daily stress, and work-life conflicts are causing an increasing number of Zem operators to consider occupational reconversion in terms of transitioning from Zem jobs to other options. This may require training or additional education to find jobs that give meaning to operators' lives.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

The study's background and the statement of the problem under investigation are presented in this chapter. Subsequently, the chapter also includes the objectives and hypotheses of the research. In addition, the chapter also presents the scope, limitations, and significance of the study.

1.2 Insertion

The researcher is a member of the Institute of the Brothers of the Sacred Heart whose mission is to educate and evangelise to young people, particularly through educational pastoral care. Their vision is oriented towards transforming young people into agents of transformational impact in society. Their approach, inspired by the founder of the Institute, Father André Coindre, is based on the spirituality of compassion and the pedagogy of trust, focusing on underprivileged and under-deserving children and young people with limited opportunities in life. In line with the apostolate of their Institute, as the researcher was appointed Principal of a high school, he sought financial support to assist some out-of-school youth to engage in the motorbike transport business (the Zem) as a source of earning a living.

His doctoral studies in social transformation complement his postgraduate studies in auditing, finance and accounting, and his earlier studies in economics and organisational management, as well as his background in religious sciences of education.

Whereas his specialization in sustainable development sharpened his retrospective reflection on the social, economic, and environmental sustainability of the Zem economic model, Tangaza University's vision of teaching minds, touching hearts, and transforming lives challenged him, as a Brother of the Sacred Heart, to engage in life-transforming thinking, following the charism and mission of the Institute of the Brothers of the Sacred Heart.

Over time, the Zem economic activity has emerged as an alternative to unemployment in Benin, employing hundreds of thousands of men and women. However, the mushrooming of Zems in Cotonou, Benin's economic capital, has sparked a conversation about their reconversion that has become a topical subject. Joining this conversation, the researcher believes that engaging

in a reflection on how to improve the living and working conditions of Zem operators in Cotonou would pave the way for a potential social transformation that could have significant and wide-reaching socio-economic and environmental impacts, in connection with Sustainable Development Goals. Hence the researcher's interest in this topic:

Economic reconversion in the Zem industry, to improve the socio-economic well-being of Zem operators, in Cotonou, Benin.

1.2 Background to the Study

According to Klein and Fontan (2003), economic reconversion is imposed by necessity and conditioned by economic imperatives. In this logic, the concept of economic reconversion emerged in the aftermath of the Second World War with the necessity to find jobs for war-employed people, and a new economic vocation for war production industries (Ulrich, 2012). As a corollary, economic reconstruction after the Second World War led to the full employment approach as a rallying cry in the United States of America and elsewhere. The concept evolved and was broadened later and refers to adjusting to new deals, and new social and economic challenges, especially in the now unpredictable world of work or employment.

In this connection, this study was informed by the transformative attributes of work as presented by World Development (2013), with, among other transformations to be credited to work, its potential to improve the socio-economic well-being of workers, especially with opportunities for vocational transitions that enable workers to find jobs that give meaning to their lives. In this sense, the study highlights the need for continuous improvement in people's living conditions and overall socio-economic well-being. In this approach, the study assumed that since commodities are contingent on monetary values, income appears to be crucial as an essential component of socio-economic well-being.

Furthermore, the ability of work or employment to generate this income, among other social values, is well established. Therefore, it is essential for this study to attach analytical weight to work or employment as sources of income and their transformative attributes. In line with this, the World Bank identified three transformative dimensions of employment for both individuals and society: living standards, productivity, and social cohesion (Filmer et al, 2014).

First, as people work their way out of hardship, their standard of living increases and poverty decreases. For example, investing in agriculture to ensure the viability of small-scale farms in rural areas can improve living conditions and alleviate poverty. As for productivity, workers become more efficient, and even better, with the opportunity to reconvert from less to more productive jobs. The third transformative dimension of employment is its ability to create and maintain social cohesion. In conflict zones, for example, social cohesion can be restored by providing more decent jobs for combatants and youth at risk of engaging in violence. This perception of work and employment is partly representative of the views of policymakers. Otherwise, people generally view employment for the income and benefits it generates, as well as for its contribution to self-esteem and the way it makes them feel good about themselves and happier.

The World Development Report 2013 (WB, 2012), for its part, emphasises the transformative attributes of employment by stressing that employment is more than just a source of income, as it also incorporates a significant socialising function. The identities and societal perceptions of individuals seem to be shaped by their occupations. As such, unemployment must therefore be an unbearable driver of stress. Consequently, employment and the type of occupation could have a substantial impact on the social and economic well-being of individuals. In this regard, employment opportunities could contribute to social transformation by reducing injustices, inequalities, and socioeconomic disparities.

In developing countries, particularly in sub-Saharan Africa, these socioeconomic disparities are more pervasive in the labour market, which is strongly influenced by the dualistic structure of the economy. On one hand, the elite-reserved formal sector with jobs in the state administration, multinationals, and the resources sector is restricted and somewhat exclusive. On the other hand, the informal sector with low incomes and often no social protection for the most vulnerable is left to the vast majority of middle- and lower-class citizens who must be content with the meagre incomes of the informal economy or subsistence sector and struggle to make a living. The United Nations Development Programme rightly pointed out this dualistic economic system as one of the main drivers of injustices, inequities, and disparities (UNDP, 2017).

Djossou (2017) noted that Harris and Todaro investigated the choice of employment in the informal sector to comprehend how the majority of workers in developing nations end up in the informal sector. They discovered that the decision to operate in the informal sector is involuntary, as the labour market is fragmented, and entry into the formal labour sector is constrained. These obstacles contribute to preventing individuals from accessing the formal employment sector. Similarly, Alcaraz et al (2015) confirmed the assumption of Harris and

Todaro by arguing that in Mexico, the voluntary choice to work in the informal sector is related to the existence of barriers to entry to the formal labour market. Therefore, reducing barriers to entry into the formal labour sector would substantially reduce the size of the informal sector and improve labour market performance. On the other hand, increasing these barriers would lead to higher unemployment and inequality in the labour market.

According to Adam Smith's classical economic theory, economic agents are rationally motivated in their employment decisions. This explains the preference for formal jobs with higher pay, over informal jobs with lower pay. However, factors other than monetary considerations may impact the decisions and choices of workers. This is the claim Nordmann et al. (2016) constructed to refute the forced choice approach to informal sector work, arguing that informal sector job is a voluntary choices. In this dynamic, the debate on the voluntary or involuntary nature of informal sector work has heated up and intensified in recent years, following empirical tests of the dualistic nature of the labour market in developing economies to which researchers have been able to find consensus (Alcaraz et al., 2015). Amid this heated debate, Faustin et al. (2021) shifted the emphasis back to the intersectoral nature of work, thereby placing the transformative benefits of employment back at the centre. Consequently, they emphasised intra- and inter-sectoral occupational mobility for its potential to increase workers' productivity, and as a remedy for poor working conditions and income disparities in the labour market.

In the context of Benin, the analysis of the labour market is significantly influenced by the dynamic polarization between formal and informal markets, as well as voluntary and informal employment. These dynamic shapes the understanding of unemployment, underemployment, income disparities, and socio-economic well-being. According to Coovi and Noumon (2020), deteriorating conditions resulted from dismantling welfare programs, enabling a rise in precarious informal work. This challenging informal job landscape in Benin is marked by factors such as diminishing purchasing power, the absence of employment contracts for domestic and agricultural workers, limited access to essential services like health insurance, healthcare, and social security, and the looming spectre of financial insecurity in old age. The 1990s social, political, and economic crisis sparked creative private initiatives as citizens' self-reliance emerged. Each tended for themselves in a 'every man for himself' spirit coinciding paradoxically with the communist regime's motto 'rely on our efforts' (Boco, 2015). As living conditions became increasingly challenging, people embraced this motto as a way of life, signifying a shift away from reliance on the state, whose credibility had significantly eroded over time (Boco, 2015).

An insight into this situation was provided by Ehebrecht *et al.*, (2018), who pointed out that the inadequacy of the structural adjustment reforms (SAP) coupled with the mismanagement characteristic of newly independent African states, was responsible for the collapse of national public transport companies, unable then to meet the growing demand for mobility as cities expanded; hence, the conducive environment for private initiatives. In their effort to fend for themselves, the laid-offs, unemployed, and underemployed rushed to seize opportunities left by bankrupt state enterprises, particularly the transport industry. In a kind of bottom-up response to the unmet mobility demands, informal motorbike transport emerged, flourished, and spread across the country and into neighbouring countries.

Benin has reported substantial declines in its unemployment rate to 2.4% in recent years (Djossou, 2017), superficially suggesting improved labour market functioning. However, through a critical lens accounting for Benin's socioeconomic complexity, such macro-level indicators inadequately capture underlying labour challenges. While unemployment fell, underemployment persists exorbitantly at 90% according to National Statistics (INSAE, 2013), disproportionately within the booming yet precarious informal sector (Coovi and Noumonvi, 2020). This divergence between unemployment and underemployment rates implies a labor absorption unrelated to productive employment opportunities. Households remain vulnerable, as evidenced by employment concerns affecting over half (51%) of heads from March to December 2020 during the pandemic (World Bank, 2021). Income losses impacted 61% of households over this period, underscoring underemployment's impacts on welfare (World Bank, 2021). Regarding this issue of employment, a Zem operator shared insights with the author during the exploratory phase that enabled identification of the topic for this study:

"I've placed job applications all over the place, but I haven't had any feedback in almost a year and a half. I also don't know any big man to refer me, yet whoever refers you counts a lot in your chances of getting a job. My mother had to use her business funds to buy me a bike for Zem, and I am paying it back little by little. That's how I ended up in a job sector that doesn't match my educational background".

This testimony sheds light on the challenges of finding formal employment in Benin and why job seekers often turn to informal work, particularly as Zem operators. It supports the theory that rising unemployment pushes individuals into low-skilled informal jobs (Faustin et al., 2021). Reflecting this reality, a staggering 95.3% of Benin's active unemployed population works informally (INSAE, 2018), where operating Zems is a dominant livelihood. Zems account for 75% of Benin's transportation needs (Djossou, 2017) and employ 90% of those in the informal

sector (Assouma, 2019), making it the largest employer. Though precise figures were unavailable due to outdated data and lax regulation, estimates placed the number of Zems in Cotonou, a city of one million people, between 200,000-300,000—initially suggesting a thriving industry.

However, as competition intensified with mushrooming Zem numbers in recent years, profits declined. Revenues steadily decreased due to oversupply, as documented by Brion (2012) and Blimpo (2014). As predicted by classical economics, oversupply drives down prices when other factors remain constant, a phenomenon Pires (2016) also explained occurs as successful businesses attract new entrants. This growing competition in Cotonou now threatens Zem operators through "creative destruction" as public transportation gradually improves with yellow taxis. Creative destruction, the process of economic development destroying outdated systems and inventing new ones, weakens market leaders' dominant position as revenues fall (Leja and Nagucka, 2013; Pfarrer and Smith, 2015). This phenomenon occurs as a result of the emergence and spread of imitations. As a result, overall market expansion slows until a new innovation challenge the status quo.

On the other hand, Covid-19, which impacts on the world's poor (UNDP, 2021), has also disrupted livelihoods in Benin, reducing Zem activity in a context of lack of social protection for most informal sector workers. Zem operators face profound daily challenges in a volatile and unregulated environment, with long working hours, low pay, health risks and accidents (Spooner, 2011). The growing problems have made reconversion an urgent concern, with government reforms ranging from transformation to improvement to prohibition to address the sector's inefficiencies.

This study draws a parallel between rising unemployment prompting widespread Zem involvement and the risk of unemployment faced by war veterans to contextualize a solution-based approach. Post-war initiatives in the United States swiftly implemented economic reconversion to reconvert veterans to new jobs and refocus war production industries to new economic vocations, demonstrating reconversion's dual potential for occupational transition and societal well-being (Smith, 1983; Wilensky, 1961). This economic reconversion also encompasses occupational transition—navigating changing work dynamics to ensure well-being (Sullivan, 2016). Subsequent research expanded on reconversion across diverse worker populations, challenging assumptions that retirement terminates working life (Masdonati et al., 2017; Fournier et al., 2017; Johnson, 2009; Spradley, 2012). These employment dynamics underscore societies' value in work and their role in alleviating challenges like conflicts, insecurity, or health burdens, including those from air pollution imposed by Cotonou's Zems.

Economic reconversion thereby presents opportunities to address anxieties stemming from precarious livelihoods among policymakers, job seekers, and the economy's contributors (Svampa, 2019; Sen, 1999). As opportunities rise and fall, anxiety grows among jobseekers and policymakers tasked with creating jobs (Svampa, 2019), evidencing that all have roles contributing to well-being through the economy (Sen, 1999). Moreover, especially in democracies linking socio-economic and environmental welfare, decision-makers have to prioritise protecting existing jobs.

Acknowledging the work's growing volatility, this study advocates social transformation attuned to precarity and unpredictability realities in Cotonou. The proposed reconversion approach thoughtfully considers evolving occupational dynamics and demanding attention in the post-COVID era moving beyond simplistic narratives of insecurity towards pragmatic, solutions-driven perspectives on fluid work realities (ILO, 2020). However, skill and creativity smooth the navigation of unpredictable changes, as those with less education face not only exacerbated vulnerabilities to economic shocks and economic exclusion in terms of employment, housing, and finances, but also face insecurity, disqualification, and social marginalisation (Michonova, 2008). Education better equips individuals to anticipate needs, innovate solutions, and steadily adjust, as it is argued that education and skills are the drivers of occupational transition and contribute to the socio-economic well-being of individuals in sub-Saharan Africa (Adams et al., 2013).

Research has documented reconversion options for certain occupations and workers including nurses, teachers, top sportsmen and women, and even retired workers to find jobs that give meaning to their lives (Fournier, 2017). However, little attention has been paid in available policy and research literature to the circumstances of informal workers, particularly Zem operators, in a context of emerging hardship (Neffa, 2014; Gazier, 1990), although their reinvention is worth examining to cultivate well-being beyond mere dependence on fluctuating Zem incomes (ILO, 2020). Consequently, this study questions how Zem operators might develop provisions for occupational reinvention and participation in Cotonou's evolving labour market. Ultimately, reconversion has the potential not only to enhance individual fulfilment but also to advance common well-being through inclusive and sustainable economic and social transformation.

1.3 Statement of the problem

During the 1980s financial crisis, developing economies were subjected to structural adjustment measures enforced by the Bretton Woods institutions. Benin was not spared. Unemployment and poverty soared as a result of economic layoffs and the privatisation of public enterprises, including transport, which collapsed in the aftermath. To cope with the deterioration of their living conditions, the unemployed and redundant have resorted to Zem, an existing economic activity of motorbike transport, which continues to support many people, employing thousands of men and women. The city of Cotonou, alone, is credited with an average flow of 10,610 new Zems per year (Djossou, 2017; Lawin et al, 2018).

The lax or uncontrolled entry into the Zem market has led to a proliferation of Zem service providers, which has led to oversupply and lower profits (Brion, 2012; Kordestani and Mohammadi, 2016). In this unregulated and highly competitive environment, Zem operators struggle with low incomes, long working hours, poor working conditions, health risks, and lack of social security (Spooner, 2011). Despite these challenges, Zem operators have not been able to adapt to economic, social, political, and environmental dynamics, while their material living and working conditions have been further deteriorating. The government deemed the sector suboptimal and attempted to implement changes through various policy measures, ranging from improvement to transformation to prohibition. Studies, meanwhile, suggested restructuring with market entry requirements, and other regulatory measures (Finn, 2011), and advocated for education and skills as drivers of occupational mobility, socioeconomic well-being, and the ability to anticipate and adjust to change (Adams et al., 2013).

Nevertheless, the once-thriving Zem economic model continued to run out of steam and was hardly self-sustaining. The Zem occupation has become precarious and unpredictable, while operators faced economic, financial, and employment exclusion, suggesting the need for economic reconversion as part of the transformation of this industry. Therefore, this study adopted economic reconversion to approach social transformation in the Zem workers' community in Cotonou, with a view to improving their socio-economic well-being.

1.4 Purpose of the study

This study aims to improve the socio-economic well-being of Zem operators in Cotonou, Benin.

1.5 Objectives of the study

This study aims to examine the potential for economic reconversion in the Zem industry by testing the structural operating factors likely to influence ZOSEWB. The focus is on devising measures that will specifically elevate the socio-economic well-being of Zem operators, ensuring a comprehensive enhancement of their living and working conditions. Furthermore, socio-economic, and demographic factors were considered, as well as the ZOs' willingness to reconvert, and alternative ways to earn a living. As a result, the study was guided by a general objective, which was further subdivided into four specific objectives relating to the factors influencing ZOSEWB, and a fifth specific objective relating to ZOs' occupational reconversion to improve their SEWB.

1.5.1 General Objective

The general objective of this study is to investigate a prospective economic reconversion in the Zem industry in Cotonou, to enhance the socioeconomic well-being of operators.

1.5.2 Specific Objectives

To achieve the objective of the study, five specific objectives were formulated.

- (i) To establish the influence of ease of entry into the Zem business in Cotonou, on Zem operators' Socio-economic Well-being.
- (ii) To examine the influence of the educational background on Zem operators' Socio-economic Well-being., in Cotonou
- (iii) To determine the influence of the government business regulations on Zem operators' Socio-economic Well-being., in Cotonou
- (iv) To find out the influence of access to finance on Zem operators' Socio-economic Well-being., in Cotonou.
- (v) To explore how Zem operators can reconvert to boost their income and Socio-economic Well-being., in Cotonou

1.6 Research Hypotheses

H₀₁: Ease of entry into Zem industry in Cotonou has no significant influence on Zem operators' Socio-economic Well-being, Cotonou.

H₀₂: The educational background of Zem operators has no significant influence on Zem operators' Socio-economic Well-being, in Cotonou.

H₀₃: Government business regulation has no significant influence on Zem operators' Socio-economic Well-being, in Cotonou

H₀₄: Access to finance has no significant influence on Zem operators' Socio-economic Well-being, in Cotonou.

1.7 Scope and Delimitation of the study

The main objective of this research is to study a potential reconversion of the Zem industry in Cotonou. To do so, it investigated the relationship between the entry conditions into the Zem market, Zem operators' level of education, business regulations and access to finance, and the socioeconomic well-being of Zem operators in Cotonou. It also investigated the willingness to reconvert, the ways to reconvert, and the activity to be considered for reconversion to improve ZOSEW. The study was limited to the city of Cotonou, Benin's economic capital and main business centre. The impressive number of Zem in Cotonou (over 2 to 300 thousand Zem) suggests a significant impact of the social transformation of the Zem community in Cotonou. The survey for this study was limited to Zem operators in Cotonou and the interviews for in-depth information were limited to resource persons in Cotonou. As much as Zem operators in Cotonou were the most likely to talk about the living and working conditions of Zem, the resource persons were people familiar with the functioning of the Zem activity in Cotonou, such as central and local government officials, Zem trade union leaders in Cotonou, etc.

Other factors related to motorbike transport such as negative externalities did not receive the same attention, for the sake of focus, the reconversion of Zem operators to improve their SEW. Zem operators from other areas even close to Cotonou were not part of this study as well as Zem union members who do not leave in Cotonou as they likely don't experience the phenomenon of Zem as the inhabitant of Cotonou. Zem operators who interrupted the questionnaire administration process due to clients showing up were excluded, as it was difficult to trace them to complete the questionnaire.

1.8 Assumptions

This study posits that the enhancement of socio-economic well-being among Zem operators in Cotonou necessitates a comprehensive restructuring of the Zem industry alongside the establishment of a conducive environment for occupational transitions. Within this conceptual framework, it is assumed that the prevailing entry conditions entry into the Zem industry exert a substantial impact on operators' earnings and overall socio-economic well-being. This assertion extends to encompass the regulatory landscape, financial accessibility, and educational attainments, the latter, significantly shapes operators' choices regarding alternative employment avenues.

The study further assumes that discernible associations exist between these critical predictor variables and the ultimate outcome variable, forming the bedrock of empirical inquiry. The researcher maintains the belief that these intricate relationships are tangible and can be systematically uncovered through rigorous investigation.

In essence, the study posits that a nuanced exploration of factors such as ease of entry into the Zem business, educational levels, regulatory frameworks, and financial accessibility, among other variables, could serve as a transformative strategy to counteract the prevailing trend of Zem operators facing precarious living and working conditions in Cotonou. This assumption establishes the groundwork for an in-depth examination of the multifaceted dynamics that influence the socio-economic landscape of Zem operators, aiming to contribute meaningful insights to the scholarly discourse on economic reconversion and social well-being.

1.9 Significance of the study

This research endeavors to enhance the Social and Economic Well-being of Zem operators within the context of sustainable development for social transformation. In the realm of sustainable development, social and economic well-being stands as integral outcomes of transformative social processes. Consequently, this study holds significance as it seeks to catalyze social transformation within the community of Zem operators in Cotonou, specifically by elevating their working and living conditions. This study significantly contributes to scholarly knowledge on sustainable livelihoods and social transformation in developing countries, advancing theoretical understandings of socio-economic well-being beyond conventional indicators. The nuanced conceptual framework integrates social, cultural, and empowerment dimensions, offering insights applicable to broader development, poverty alleviation, and quality of life debates.

Methodologically, employing a mixed-methods approach of life history and participatory action research generates extensive qualitative data, addressing gaps in local knowledge incorporation and enhancing community-centered scholarship. The findings offer empirically grounded insights into structural challenges within the informal sector, specifically the Zem industry, informing evidence-based policymaking aligned with local realities. The study presents actionable recommendations for economic reconversion strategies, distinguishing itself from descriptive case studies through its integrated approach of research, community empowerment, and solution orientation. It contributes an original perspective to wider debates on African informal economies and development paradigms. Publishing results in an open access format enhances knowledge dissemination beyond geographic borders, maximizing academic and social impact.

As a study aimed at social transformation through enhancing sustainable livelihoods, it directly contributes to advancing several Sustainable Development Goals (SDGs). By seeking to establish alternative, dignified sources of income for zem operators, the study supports poverty eradication per SDG 1. It helps address vulnerability and lack of social protection for informal workers, in line with target 1.3. Improving occupational safety, health and social conditions for zem operators also aligns with SDG 3's goal of ensuring healthy lives and promoting well-being for all. The focus on economic reconversion and job creation echoes SDG 8's emphasis on promoting inclusive and sustainable economic growth, full employment and decent work. It explores avenues for alternatives to consider for occupation reconversion including entrepreneurship and micro-enterprise development. This is significant given zem operators' limited access to credit and financial resources. Beyond economic indicators, the study adopts a holistic approach to socio-economic well-being, considering quality of life factors such as satisfaction, social relations, and empowerment—a crucial aspect of sustainable development.

The research helps address a sensitive local issue through community-centered recommendations and strengthening of partnerships. It adds critical empirical evidence to guide more effective public policymaking. Scholars also stand to benefit from the study.

Ultimately, by centering experiences and priorities of vulnerable groups, the study makes an important contribution towards building a more just, equitable, and people-centered society in Benin, aligning with Agenda 2030. Its lessons hold potential to inspire similar initiatives regionally and globally.

1.9 Summary

This research, rooted in the United Nations' bold and transformative vision (Agenda 2030) of leaving no one behind, is situated in the context of social transformation. Furthermore, the 2030 Sustainable Development Goals (SDGs) underpin this research, which aims to transform the lives of Zem operators through job mobility as a way out of precarity. This chapter has presented the context that informs this study, the problem statement, the purpose and objectives of the study, as well as the hypotheses to be tested on the factors that may influence the socio-economic well-being of men and women operating in the Zem sector in Cotonou. In addition, the importance, scope and delimitation of the study were presented. Having set the scene for the study, this chapter was then followed by the theoretical and conceptual frameworks informing the study and the gap that the study intends to fill.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of the relevant theories and studies that inform this research in relation to the objectives and hypotheses of the research. It also highlights the gaps in the literature and provides the conceptual framework.

2.2. Theoretical Literature Review

2.2.1. Navigating the theoretical terrain

This study requires a robust theoretical framework to guide the analysis and interpretation of data from a transformative socio-economic perspective. Historically, economics has relied heavily on competition theory to explain market functioning and firm performance. The neoclassical perfect competition model remains the most iconic conceptualization, based on assumptions like atomistic suppliers/demanders, homogeneous goods, perfect resource mobility, transparent markets sans information asymmetry, and rational agents. However, the model faces valid criticisms. Its assumptions of transparency and absence of asymmetry, implying perfect foreknowledge of present and future, may not reflect realities in the motorbike transport industry due to competing alternatives and other contextual factors. Additionally, the model does not incorporate social, political, institutional or structural phenomena integral to Cotonou's economic reconversion. Most critically, it provides insufficient industry-level details like entry/exit characteristics shaping Zem market structure in Cotonou. As such, perfect competition alone cannot fully explain how this industry is organized.

Recent scholarship also challenges the model's underlying assumptions. Galbreath and Galvin (2008) note heightened competition and economic dynamism increasingly strain theoretical constructs of industrial organization. This directs attention to evolving paradigms within industrial organization research spurring the emergence of New Empirical Industrial Organisation (NEIO) focusing on cross-sector meta-analyses (Bresnahan, 1989). However, determining competitiveness drivers at both strategic and structural levels remains elusive. While the NEIO offers an alternative lens, like preceding approaches, it remains a mere alternative paradigm. Bhuyan (2014), thus, contends the debate on the use of one approach or another for

the analysis of industrial structures should continue, keeping avenues open for adoption of one or more approaches to the analysis of industrial markets.

Against this backdrop, the present study adopts Contestable Market Theory (CMT) as the primary explanatory framework for Zem industry structure in Cotonou. CMT also guides estimates of revenue evolution. Complementing CMT is Mechanism Design Theory, which through reverse engineering, helps predict structures capable of desired outcomes. Finally, State Intervention Theory informs estimates and predictions of regulatory policy influence on operator incomes and living conditions in Cotonou by determining optimal government intervention for effective reconversion policy implementation.

In summary, this dissertation utilizes three integrated theories - Contestable Markets supplemented by Mechanism Design and State Intervention - to analyze data and contextual complexities from a transformative perspective.

2.2.2. Contestable Market Theory

The Contestable Market Theory (CMT) developed by Baumol, Willig and Panzar (1982) implies zero discrimination costs against new entrants. The exit is also free in the sense that any company, for example, a Zem operator, can decide to quit the market without bearing a high exit cost, as all capital could be resold or reused. The only costs would correspond to the normal depreciation. Any risk related to the entry is minimised as free entry is guaranteed by a free exit (reversing entry).

Thus, free entry and free exit are necessary conditions for hampering the greed of market monopolists, limiting excessive profits to a minimum to serve better the interests of consumers (Baumol et al, 1982). The threat of potential competition constantly seeking to enter the market attracted by profit suggests that potential competition is an essential feature of perfect contestability (Martin, 2000). Nevertheless, a contestable market requires a free entry, perfectly reversible entry in the sense that sunk costs are zero, with established operators and new entrants having equal access to technology and to customers, which means that the services of established operators and those of new entrants are easily accessible to clients (Gagnepain *et al.*, 2011). In terms of regulation, Amavilah (2012) argues that regulation is necessary to guarantee the conditions of efficiency and price in the contestable market. However, the theory does not recommend traditional regulation for a natural monopoly since the pricing conduct of the incumbent firm would be disciplined by the threat of potential entry as long as the market is contestable. Still, Abdelkader and Mansouri (2013) emphasized that entry barriers prevent

potential competition from influencing the behaviour of established operators, who, in return, should be subject to incentive regulation to avoid abusive monopoly behaviour. In essence, with free entry and exit, the potential competition would be enough to regulate the market in the place of the regulator.

The contestability theory has been applied in several areas such as transport, banking, environmental sectors, *et cetera*. In the USA, it was applied in the airline transport industry in 1978 to open the US airline transport market to competition and influence pricing. Similarly, it was applied in Europe with the Transport Act in Great Britain in 1985, which aimed at subjecting British Bus transport companies to competition. It was expected that any attempt to maximise profits for operators in the transportation sector would keep to a minimum due to the threat of potential entry into the sector. Indeed, according to CMT, potential competition has a greater influence on pricing policy. In the field of environment, OECD (2006) argued that theoretically, the absence of constraints in terms of requests for compensation for pollution would justify the conduct of companies regarding the environmental quality and health of their products and the production methods.

The theory of contestable markets is not entirely immune to criticism. The fundamental behaviour of firms is often more complex than the model proposed by this theory. In the business world, there are very few markets where entry and exit are absolutely free in the sense of the contestable market. An established operator may have the advantage of experience in terms of technical information and reputation. Similarly, barriers to exit are open to debate because in practice there are always sunk costs, at least advertising costs. Research shows that, in most markets, these costs are more evident in the short run than in the long run, and that small firms have more flexibility than large ones (Chen, 2014). Nevertheless, the analytical tool proposed by Baumol, and his companions has led to important changes in the regulation of some markets, such as the transport market, the energy market, etc. On the other hand, a contestable market may reduce the risk that firms behave inefficiently by not pursuing the lowest costs or by allowing organisational laxity to develop. This would be an invitation for new competitors to enter.

Ultimately, the theory of contestable markets implies, among other things, that, in such market structures, it is not possible to maximise profit. However, the contestable market theory does not address the correction of the Zem market structure to increase the level of income in the Zem industry in Cotonou in order to improve the socio-economic well-being of Zem operators. It is therefore useful to refer to a theory of alternative structures that can best generate predetermined outcomes. The theory of mechanism design seems appropriate in this case.

2.2.3. Mechanism Design Theory

The theory of mechanism design (MDT) was developed by the 2007 Nobel Prize winner Eric Maskin in 1960. This theory provides a coherent framework for analysing various mechanisms for allocating resources and considering the necessary incentives to make them work. In the 1960s and 1970s, according to Legros and Cantillon (2007), Leonid Hurwicz, Roger Myerson, and Eric Maskin got interested in problems linked to collective action, with the desire to find principles to solve them. They looked at designing efficiency mechanisms in markets, organisations, and institutions. The driving idea was that in developing better strategies to coordinate any group in the presence of information asymmetry, divergent interests, and limited knowledge, incentive constraints are as necessary as resource constraints (Jackson, 2014). They suggest considering what informs and motivates the actions of people and organisations. These theorists are part of the trend that has been in vogue for a few decades now on analysing market functioning, information asymmetry, game theory, or experimental or behavioural economics.

To understand Mechanism Design, let us consider economics from the perspective of classical economists along the line of Adam Smith. They inform that market allows, in theory, the optimal allocation of resources. Nevertheless, in practice, market conditions are not as favourable. The information is asymmetrical in the sense that consumers are not perfectly informed, and the concept of perfect competition is unrealistic. Also, the market is not always open, and as such, there are transactions within companies through negotiations between individuals or interest groups, often based on specific regulatory provisions. In addition, there is a continuous increase and improvement in the volume and diversification of information on individuals' preferences and production technologies, which economic actors can use and combine to promote their interests. In these conditions, the concern is about implementing models so that institutions or allocation mechanisms are efficient and deliver the target goals of social well-being and profit.

In essence, the general economic process is concerned with taking existing institutions or structures and trying to predict or explain the outcomes those institutions can generate. Nonetheless, mechanism design does just the opposite. While classical economics takes existing institutions and predicts the results they can generate, the design mechanism takes the opposite path, starting by identifying the results one would like to have and then working backwards to determine which institutions would be able to generate such results.

The interest of MDT lies in its generality, in the sense that it presents a unified framework for evaluating any procedure, whether market-based or not. The range of potential applications of mechanism design is huge, as it is increasingly a very active field. Becoming a central element of economic theory, mechanism design is used for applications ranging from privatisation to the conclusion of international agreements, including environmental treaties such as agreements on greenhouse gas emissions. It is also used to design financial regulations, the case that is applicable in this study. MDT is also applied in public service delegations. For example, when a state, a city, an institution or even an individual- launches a bid for public or private projects, it tries to find which system to set up to obtain the most profitable offer for a defined quality of service and encourage the bidders to reveal their costs and the quality of their work (Maskin, 2016). The theory is also used in the contract system to help employers make the employees play the game in which they have total interest in making the maximum profit.

On the regulatory front, Myerson pioneered the design of mechanisms to design optimum regulatory arrangements that could ensure the delivery of public services at a lower cost. Other researchers have positively influenced regulatory systems and the design of contracts with international organisations and infrastructure providers in developing countries. It has been applied to the resolution of community problems such as the right of access to credit. It serves as a driver of current microfinance successes, especially in rural areas, highlighting the importance of understanding borrowers.

Despite some criticisms of its application, mechanism design emerges as a normative theory that primarily seeks to know what to do to solve a given problem and provides a guide for designing alternatives that can better deliver the desired outcomes. This innovative theory informs the present study on a potential restructuring of the Zem industry in Cotonou. However, mechanism design theory does not specify which bodies can develop the appropriate structures to generate the pre-determined outcome such as the socio-economic well-being of Zem operators in Cotonou. Since the market failed to effectively reward Zem as to enjoy better living conditions, the government could intervene to design and implement the structure most likely to improve the socioeconomic well-being of the Zem operators. Hence the theory of state intervention is presented to help overcome the pitfalls of both the contestable market theory and the mechanism design theory.

2.2.4. Intervention Theory

Addressing the issue of regulation in economics tacitly implies the notions of "laissez-faire" versus "interventionism" held by the neo-liberal economists and Keynesian economists respectively. The "invisible hand" developed by Adam Smith, on the one hand, and the "visible hand" of the State, by John Maynard Keynes, on the other hand, occupy such a place in everyday life that these two concepts have, to some extent, the force of evidence. According to Conway, Janod and Nicoletti (2005), a legal and regulatory framework is necessary for the existence and functioning of a market, and this framework can, in certain circumstances, be determined by the market itself without state intervention. Only, the market's form of self-regulation is often small-scale, while market expansion can only take place on an appropriate institutional framework. In this regard, left to the sole initiative of private actors, the functioning of the market is subject to various failures leading to undesirable economic and social situations, such as the negative externalities associated with the Zem economic activity in Zem in Cotonou, which the market seems to ignore or underestimate.

The thoroughly liberal functioning of the market can also lead to macroeconomic imbalances such as mass unemployment, proven, for example, to be the cause of the proliferation of Zems in Cotonou. Similarly, the dysfunctional nature of competition would not lead to an optimal allocation of resources. Moreover, the 1929 stock market crash shows clearly that the market's self-regulatory mechanisms were neither able to avoid this crisis nor to regulate it. Proponents of public intervention have found arguments in this failure to castigate the weakness of the law of supply and demand to secure economic equilibrium, hence state intervention was necessary to sustain the proper functioning of the economy. Two schools of thought, Liberals, and Keynesians lead the debate on the issue of public intervention in the economy and businesses.

In the 18th and 19th centuries, according to Kabaka (2016), the classics came up with a concept of the police-state, whereby the role of the state is limited to finance, security, justice and diplomacy. Any other involvement in the social sector and economy would undermine the private sector in terms of initiative and the natural functioning of the market economy. Thus, liberal thought opposes all state interference and advocates economic liberalism based on laissez-faire and market self-regulation by the "Invisible Hand" of the economist Adam Smith. Reed (Feb 27, 2019) reinforced this, painting the laissez-faire approach as claiming that the market knows best. Therefore, the government should intervene as little as possible in market functioning, as the choices and decisions of workers, consumers, and capitalists at the individual level, without outside interference, are more rational. This approach emphasizes that, from the

perspective of prosperity for all, the State must take a step back as much as possible and let consumers make the right decision for themselves, according to their interests. As such, Kabaka (2016) mentioned that by 1970s, neoliberal economists considered that state intervention was destabilizing the economy and therefore, less state was better state. They advocated privatisation and deregulation, i.e. the abdication of the state's role in setting standards in economic and financial sectors. This was the doctrine advocated in the 1990s by the Bretton Woods institutions (IMF and World Bank) to impose on developing economies structural adjustment programmes as a remedy to the financial crisis of the 1980s, which did not spare Benin either.

Furthermore, it can be noted that the neoliberal approach of non-intervention is not entirely convincing because it does not consider the existence of public goods that only the state can effectively provide. In addition, regarding the financial crisis of 1929, which caused the stock markets to collapse, the neoliberal model based on laissez-faire showed its limits, as the markets did not self-regulate. So contrary to the neo-liberal plea for non-intervention, proponents of public intervention believe that capitalism still needs some guidelines and a look from the central authorities. Actually, not all members of an economy have the capital to follow their interests. Moreover, when a market is unregulated, it can be vulnerable to monopoly, manipulation, and corruption. Effective regulation would serve as an instrument to avoid failures and help the economy reward many people instead of a privileged few as is currently the case in Benin where formal sector workers enjoy significant social protection compared to most informal sector workers (ILO, 2019)..

Thus, a new doctrine was needed to legitimize state intervention in the economy in order to reverse the effects of the 1929 financial crisis. In this vein, the proponents of intervention suggest using alternative economic policies to compensate for the flaws in the economic system that caused economic imbalances since the law of supply and demand was no longer efficient enough to guarantee the profitability, and balance of the economy. Therefore, government intervention should be used to ensure the proper functioning of the economy. Kabaka (2016) reported that major economic intervention policies such as the New Deal in the United States were credited with the sustainable growth that stimulated Western economies until the 1973 oil shock. As a result, the liberal police state was replaced by the welfare state.

Notwithstanding, the doctrine of intervention, as well, is neither out of criticism nor sacrosanct. The State must be careful when establishing, applying, or enforcing regulations. Otherwise, a misjudgement of market structure can lead to higher costs of social protection instead of the expected benefits. Marciano (2021) pointed out that those who make public decisions (politicians and bureaucrats) do not do so by promoting the interests of society as a

whole in the way it is claimed in the state official discourses, but rather their own interests. In this respect, the public choice approach to state intervention considers the state to be not any different from economic agents in society. The state is sometimes selfish like individual economic agents. The selfish interest of state agents in maximising their welfare is already a source of state failure, and the market would therefore be better able to ensure social well-being. In this vein, Alston et al (2018) pointed out that rigid structures within public organisations, decision-making, and vicious bureaucratic circles impose delegations of power that generate costly structures and oversight, due to imperfect information and opportunistic behaviour by agents. In essence, state intervention should be applied, for example, in cases where global demand exceeds supply.

State intervention also takes the form of stimulus policies when the economy is in recession or liquidity shortage. The intervention consists of boosting aggregate demand to revive weakened economic activity. Thus, the state can act by lowering interest rates, leading to an increase in the monetary supply, lowering taxes and increasing public expenditures. State intervention also applies to structures, in an attempt to increase the efficiency of the productive system. These structural policies cover all the necessary sectors, notably agriculture, transport, infrastructure, industry, the labour market, financial institutions, and the functioning of markets, among others. For example, through deregulation and privatisation, the state reduces its control over the economy, similar to the structural adjustment programmes advocated in Africa in the 1990s. Nationalisations, whereby the state supports companies that are in difficulty and vital to the national economy, regulatory actions such as paid holidays, the adjustment or revision of the guaranteed minimum wage, intervention in sub-optimal markets to ensure economic progress, and the well-being of the population, etc., are all regulatory actions that form part of the structural intervention of the state.

Nonetheless, the public choice approach to regulation argues that regulation affects the efficient functioning of markets and that, in several cases, regulatory failure may be even more important than market failure (Davis & Ward, 2008). Djankov, et al (2002) also reveal that regulation would reduce competition and increase corruption. However, the theory of state intervention is relevant to this study as it relies primarily on the public interest approach to regulation. Indeed, the public interest approach considers that non-regulated markets cause various market failures such as negative externalities, potentially harming the economy. Thus, state intervention seems necessary to improve social outcomes, and social and economic well-being for ZOs in Cotonou.

Ultimately, the market and the state perform best when they cooperate, even though economic orthodoxy opposes them as two competing resource allocation mechanisms. It is inappropriate to assume that one can exist without the other. To function sustainably, markets necessitate legislative, judicial, and institutional framework which requires State action. However, states are not always as benevolent in delivering effective social well-being interventions as advocates of state intervention and proponents of minimal intervention believe. In fact, states, like markets, occasionally fail, leading to institutional failures. Nowadays, however, states tend to be more efficient, acting more frequently in a benevolent manner through the adoption of rules that limit their power so as to maximise social well-being. In this sense, decentralisation and devolution are effective strategies for implementing the ideals of good governance, which entail bringing services closer to the people.

At the end of this development, it appears that government must necessarily play a role in ensuring that markets function better. When, for example, total industry costs fall and new firms enter the market as seems to be happening in the Zem industry in Cotonou, the government should regulate entry. In essence, governments should adequately balance the conflict between the efficiency and profitability of the industry. That said, state intervention through regulation, which is the most common form of state intervention in the economy, is a relevant theory for this study.

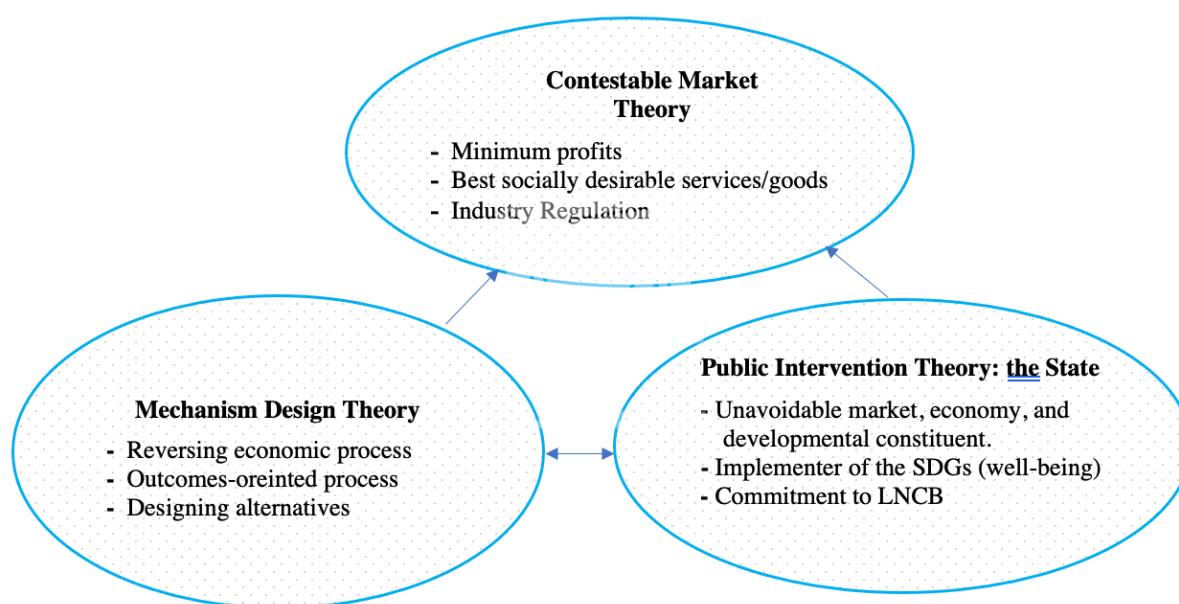
2.2.5. Theoretical Framework

The revolutionary theory of market contestability departs from traditional economic concentration (the number of firms in the market), stating that it does not tell much about the structure of the market and subsequent fluctuations in firm income, therefore focusing on the entry and exit conditions. Indeed, depending on the contestability theory, what matters is whether it is possible or not for potential competitors to enter and exit the market at no cost (Baumol 1986).

Concerning regulatory policies, contestability theory supports the opening of markets to entrants as this can encourage efficiency and discourage anti-competitive behaviour. The theory also provides better technical tools for governments and competition policy authorities to assess the type of policy to be adopted regarding the market and industry structures and helps distinguish when government intervention is helpful and when it is not.

Nevertheless, by focusing mainly on entry/exit characteristics, contestability theory as the leading theory guiding this study does not fully inform the social, political, institutional, and structural aspects of economic reconversion in the Zem industry in Cotonou. It is complemented by two other theories providing insight into the appropriate structure and policy implementers.

Figure 2.1: Theoretical Framework



Source: Designed by the author

Thus, MDT, a unified framework for evaluating any market-based procedure, sheds light on what needs to be done to solve a given problem and guides designing alternatives to generate the desired results better. Though, this theory does not indicate which organs can design appropriate structures to generate such results. Therefore, state intervention theory comes into play to complement the leading theory guiding this study, in that the government has the capacity and the means to prevent and regulate market failures and help the economy reward the majority more adequately.

2.3 Empirical Literature Review

Key concepts and variables have been used throughout this study, hence the need to understand their context and conceptualisation. These are Zem Industry Structure (Ease of Entry), Education (formal and informal/training), Business Environment Regulation, and Access to Finance as independent variables; Market (market-driven reconversion) and State (state-mediated reconversion) as intermediate variables; and SEW, the outcome variable of this study.

2.3.1. Influence of Ease of entry into a market

Market structure refers to the theory of organisations that examines companies' behaviour according to the industry structure in which they operate. The main elements influencing the market structure are the concentration of sellers, the concentration of buyers, the rate of growth of market demand, product differentiation and barriers to entry and exit (Lipczynski, Wilson et al., Goddard, 2013). On the other hand, the structure of markets cannot be reduced to these factors alone. Thus, other elements of the market structure exist. Simply, these elements are generally overlooked because they appear difficult to measure. Hence, the concentration of sellers and buyers, the size of the company and entry conditions into a market are the fundamental elements of market structure.

Nonetheless, changing economic situations have prompted a re-examination of the assumptions that underpin industrial structure theories. Some argue that structural aspects of sectors are becoming less important to performance, while company resources are being positioned as the foundation on which firms compete. In this vein, Galbreath and Gavin (2008) attempted to dispel the ambiguity using a study on a sample of 285 Australian companies. The study aimed to explore the relative importance of different resources and industry structure variables in explaining firm-level performance variation. The findings attribute a greater effect to the Enterprise's resources than the industry's structure. Thus, in manufacturing and in-service companies, intangible assets are more determined by the variation of performance, unlike the assumption of tangible resources. This study is relevant but, in its approach, it differs from the current study, where the declining income in the Zem industry market is hypothetically explained by free entry and the subsequent threat of potential entrants if there is still a minimal profit to reap in this market (hit and run strategy).

Blazkova (2016) conducted a study to establish the relationship between profitability and the particular characteristics of the firm and the industry's characteristics, using return on asset (ROA) to measure the concentration ratio (CR4) in 622 firms in the Czech food industry. He found a significant and positive effect of market concentration on firms' profitability, in line with the generally accepted assumption that firms in highly concentrated markets have the capacity to avert entry into the market, which would lead to higher profit levels. Indeed, higher market concentration in the food industry means higher profitability for companies in the industry. This study is relevant in that it confirms the influence of industry structure on firms operating in the industry, although departing from the current study as it was conducted in the food industry.

In any industry or market, it is expected in the short or long run that, excessive profits can be competed away by reactions from competitors, while high profits will attract the entry of new competitors. Viewing entry as a factor that rises supply, reduces prices, and warrants equilibrium in markets that do not socially function in desirable ways, Kotsios *et al.*, (2015) argue that entry acts as a balancing force when there is a high concentration and abuse of a dominant position. Typically, an entrant only enters a market if he can make profits. As far as market adjustment mechanisms are concerned, the absence of barriers to entry and the attractive profits for challengers lead to this intensification of competition which automatically brings profits back to normal. However, when entry occurs on a significant scale, incumbents are naturally expected to respond by setting barrier strategies. Thus, entry barriers function as strategies for adjusting entry into an industrial market.

On the definition and types of barriers, various lights have been shed on the industrial organization by many authors in the literature, and they all have different definitions and classifications of types of barriers to entry. However, Kotsios *et al.* (2015) define entry barriers as any attitude or simply anything that restricts competition in a sector, whereas increased competition would be socially beneficial. Heger and Kraft (2008), previously mentioned that entry barriers are essential in competition regulation due to their propensity to affect market mechanisms and profitability. There are some empirical studies on the determinants of barriers to entry and their effects on profitability.

Further, Martin (2000) point out that the performance of the market depending essentially on the importance of the potential entry poses an econometric problem since the potential entry is an unobservable variable. To break up this controversy, Heger and Kraft (2008) approached the effect of the threat of entry by collecting subjective data from managers' perceptions of the strength of their own competitive position threatened by a likely entry of competitors. This was

applied to estimate the effect of entry treatment on profitability. Concretely, they investigated the effect of a perceived threat of entry on profitability using subjective data. They found that the threat of entry leads to lower profits, and the reduction in profits is enough to make entry unattractive. They concluded that profitability negatively depends on competition and is negatively influenced by competitors' size and price. This reflects the mechanism by which greater competitive pressure obligates companies to lower prices and reduce sales. This study is relevant as it highlights a relationship between industry structure and firms' profits. However, it does not address specifically the Zem industry, which the current study targets and tests the effect of Ease of entry on ZOSEW.

Gagnepain *et al.*, (2011), through a study on competition in local bus services in the United Kingdom (UK), gave an insight into the conditions of perfect contestability: freedom of entry; reversible entry (free exit); equal access for the existing operators and entrants to the same equipment and all the clients (easy accessibility to the services of existing operators and new entrants); and time lags imposed by the regulator to prevent the implementation of the hit-and-ran strategy. In such a market, attempts by existing operators to gain excessive profits will be kept to a minimum, for, in case of positive profits, new operators will enter and undercut their profits. Finally, the results showed the features of the UK bus sector and the strategic actions of the existing operators, preventing contestability in the local transport market. They believe, however, that there are potential avenues of investigation to empirically validate the theoretical arguments on the analysis of the contestability of the UK bus transport industry. This study on industrial competition in transport is relevant, although it does not target motorcycle taxis, which the current study addresses.

A study by Cowie (2011) on contestability in the UK bus transportation industry, tested to determine the extent to which there was contestability, echoes the recommendation from Gagnepain *et al.* (2011) on the empirical validation of contestability arguments. In these bus markets, an examination of fares, profit margins and practical efficiencies reveal falling fares for passengers, increased efficiency, and reduced profit margins for operators. These observations suggest that the UK bus industry is contestable. However, only fifteen of the top 90 bus subsidiaries examined had criteria for operating in a contestable market. The results revealed evidence of market contestability in this industry, albeit limited to only a few sectors and not the whole market.

Coming to Africa, in the aftermath of independence, the existing transport companies in African countries were nationalised in the general development process and transformed into public companies operating in oligopolies (Eherbrecht, 2018). Then again, the financial crisis of the 1980s weakened the African States they had to resort to the Breton Woods Institutions. According to Thomson et al (2017), the WB, IMF, Regional Financial Institutions, and other Western donors advocated for Structural Adjustment Programmes (SAPs), which emphasised free-market development and privatisation.

Thus, they pushed for private sector initiatives, privatising companies in the public sector and cutting the state support for social services. The measure of the Structural Adjustment Programmes culminated in 1992 with the currency devaluation of “Communauté Financière Africaine (CFA)”, which is the common currency of the former French colonies, including Benin. Although unimpeded markets, in theory, seem to be efficient for all societies, the way particular markets work, the role of institutional infrastructure in a market economy, and the influence of culture on shaping markets in Africa revealed the pitfalls and failure in the approach of BWIs. In essence, the State's abstinence underlying these models based on neoliberalism was not efficient in solving the 1980 crisis in Africa (Thomson et al (2017)). As a result, SAPs, especially in Benin, ended up with a large surplus in the labour force and a high unemployment rate.

In South Africa, Graham *et al.*, (2019) argued that graduate unemployment is low due to relatively high demand for skilled labour. However, some groups of graduates continue to struggle to find employment. Their study on labour market barriers for unemployed graduates in South Africa focused on the gaps in the literature on why these students face the employment issue. The study attempted to fill this gap by presenting data from a mixed-methods study, including a sample of graduates facing barriers to labour market entry. The results of this research mainly show that lack of relevant work experience, lack of information on effective job search, low social capital and high job search costs are barriers to job search faced by graduates. The study recommends better integration of qualifications with practical work experience. The authors of this study also believe that accessible support for job seekers can mitigate the negative effects of the identified barriers.

The influence of ease of entry and competition was also examined by Kaunyangi (2014). The study examined the impact of competition on firm performance in the mobile telecommunication sector in Kenya. Adopting a descriptive research design, the study revealed that for 79.8% of respondents, competition has an impact on company performance, as new

entrants, competition, and supplier power all have an impact on firm success in the industry. The study also found evidence of low barriers to entry in terms of margin for new firms to enter the telecommunication industry in Kenya. The study is relevant in that it provides an overview of competition in the industrial market, but it differs in that it was not conducted in the Zem industry, the target of this study.

Barriers to entry, into the transport industry, were examined through a study conducted by Paelo and Vilakazi (2016) who examined the conditions of entry into the low-cost airline 1Time. Using an analysis of 2014 and 2015 pricing data and detailed company-level interviews, the investigation found that barriers to entry are not excessively high in the South African airline industry. The study relies on evidence of the number of entrants to illustrate this. There was evidence of consumers' benefits, and a significant effect of improved choice as well as price benefits. As a result of the significant effect of entry on the total market, the number of passengers fell and 1Time LCC left the market. The study concluded that this exit was mainly due to the impact of the anti-competitive behaviour of the incumbent (South African Airlines). This study is relevant as it illustrates the effect of barriers on profits in the airline industry, but it differs as the current research aims to test the influence of entry into the Zem industry, on profits.

Specifically regarding the two- and three-wheeled transport industry, Finn *et al.*, (2011), in a study conducted in Ghana, Sri Lanka and the Philippines, revealed that the lack of inadequate alternative employment or income sources for the youth, particularly school dropouts, makes engagement in informal transport a viable option. They highlight particularly the issues related to entry into the industry, operational regulations, customer satisfaction, and the hidden side of different and conflicting interest groups, drawing attention to the need to comprehend the sector's structure given any change. In general, changes and initiatives in the informal transport sector relate to modifications in the structure of the market and regulation, changes in the type, quality, and scale of passenger transportation services, and modifications in the nature, format, ownership, and structure of operators. More specifically, modifications are made to the rules of market entry and/or purchase of services, the intervention of the regulator to restructure the sector, and the provision for financing, or financial incentives, among others. Nevertheless, the authorities fail to regulate the industry or enforce the legislation due to the political sensitivity of the issue, with riders and owners being of considerable political and economic power, nurturing about 5% of households in the country. Largely unregulated, the sector is subject to unrestricted and massive entry by many operators in the market. The absence of barriers to entry leads to a continuous increase, thus creating an oversupply and a consequent reduction in income,

resulting in overall inefficiencies. Accordingly, an increase in fares is vital to preserving a certain level of revenue if the operator does not want to leave the market. The reduction in income affects the operators' purchasing power and limits their overall SEW.

In Benin, the response to the employment crisis of the 1980s and 1990s was the tacit or official legalisation in 1989 of the Zemidjan as an alternative to the unemployment explosion (Marchais, 2009). As this business was doing well, generating a high income, a massive wave of workers from the countryside continued to migrate to the city attracted by this lucrative business. The profitability of the business due to the relatively low price of the motorbike has also motivated many opportunists seeking any investment opportunity to buy motorbikes and entrust them to riders (Marchais, 2009; Olvera et al., 2016). In this way, According to Lawin et al (2018), the Capital city, Cotonou alone, registers officially 10,610 new entrants on average per year. However, due to a lack of updated statistics, the exact number in 2022 is unknown.

Concerning operators' socio-economic profiles, informal transport operators present the same pattern of origins and socio-demographic backgrounds (Owuor, 2018). Generally unskilled, they are the least privileged in society, living with wives and children, and supporting their whole families with their meagre incomes. The majority of them migrate from the countryside to big cities with the hope to achieve a better life for themselves and their extended families. However, they have neither the technical skills nor the educational qualifications to compete in the highly competitive formal economy. They end up with informal jobs, particularly motorbike transport, as they are also unlikely to have access to capital (Olvera et al., 2016). In the end, the relatively easy entry into the sector and the subsequent uncontrollable increase in the number turn into challenges for the industry.

Regarding entry into the Zem industry, Lawin *et al.*, (2018) conducted a study on the occupational risk factors and perceptions of air pollution by motorbike taxi riders in Cotonou. The study adopted a mixed-method approach, focus groups and survey questionnaires for 397 motorcycle taxi operators. Lawin et al. (2018) argued that, as determinants of the choice of employment, the capacities, qualifications, skills, income or wages, possible risks associated with Zem operation also represent obstacles to the job market. However, since the Zem operation does not require to some extent, any of these conditions, it attracts many people. So, the overload of the industry in Cotonou is justified by this relative Ease of entry.

Furthermore, the monthly income of \$123.40 (72,000 Fcfa) revealed by the survey stagnates or even regresses compared to the income of a few years earlier reported by Marchais (2009). This suggests that the Ease of entry would influence income. Results revealed that occupational factors were significantly related to cardiopulmonary illnesses in 63.2% of riders on the focused issue. This study adopted a health-based approach and did not focus on motorbike taxi operators' income and SEW. Djossou (2017) also conducted a study on the risk analysis and determinants of the choice of motorbike taxi activity in Cotonou. The quantitative survey of 425 operators revealed that 238 or 56% of them entered the Zem business due to lack of employment and Ease of access. The study also revealed that neither education nor qualification is required to operate in the Zem industry in Cotonou.

In furtherance of the ease of entry into this market is the affordability of setting up a business and the affordability of registration formalities, operating costs, and daily transport tickets to operate, etc. Similarly, the availability of the motorbike at an affordable price, the availability and accessibility of spare parts, and cheap maintenance contribute to some extent to the ease of entry into the Zem business in Cotonou. Although very relevant, this study stands out from the present one as it does not adopt the industrial market structure approach and does not consider reconversion in the Zem industry.

Assouma (2019) analysed the dynamics of the informal economy in Benin and revealed the Ease of entry into the Zem industry in Benin. Based on documentary analysis, he found out that occasional and illegal operators enter the Zem industry temporarily without undertaking any form of formality. He deduced that this illegal form of operation is an indicator of a very low barrier to entry into the Zem service in Benin. This relative absence of barrier to entry causes the constant and continual increase in the number of Zems, creating thereby an oversupply of service. Consequently, fierce competition arises in the market leading to a reduction in earnings. According to Kumar (2011), attempts to increase fares to maintain a minimum income level for operators who do not wish to leave the sector likely discourage customers. Highlighting the informal Zem industry in Cotonou, this study focuses on the informal economy in general in Benin and adopts documentary analysis.

This study has dealt specifically with the Zem as an economic activity, based on the theory of industrial structures. It has not, however, addressed specifically the socio-economic well-being of Zem operators, nor how they can reconvert to improve their socio-economic well-being, which is the purpose of the current study.

2.3.2 Educational Background and Socioeconomic Well-being

In the contemporary world, education is increasingly becoming one of the powerful indicators of life outcomes in terms of employment, income, social status, and more. This study conceptualises that education, including informal education, can empower motorbike taxi riders to seek alternative sources of income instead of solely relying on an industry that experiences constant shocks. Numerous studies on the effect of education on well-being concur with the same observation that education is increasingly perceived in the contemporary world as an assertive attitude and well-being predictor. Yet, the focus on education today is the flip side that makes it difficult for less educated people to develop a positive social identity about SEW. This is detrimental to self-esteem, unlike the SDGs that advocate self-esteem and promote social well-being. In this vein, the Economic and Social Research Council (ESRC) reported on a project funded by the Economic and Social Research Council's Secondary Data Analysis Initiative to study the psychological effect of differences in education.

Analysing data from the British Social Attitude Survey, the British Household Panel Survey, and the International Social Survey Program, the study found a clear association between education and well-being. The study revealed that a higher level of education induces a higher level of social well-being. Education's positive effects are related to the benefits associated with obtaining a university-level education (The well-being effect of education, 2014). The study informs the association between the level of education and social well-being but is limited to the psychological effects of the differences in education, while the current study looked for the contribution of education to the SEW of Zem operators in Cotonou.

Boodraj and Boodraj (2017) conducted a comparative study on job growth expectations in Jamaica and Trinidad and Tobago. Although there is different job growth expectations between the two countries, the result of regression analyses applied in their study revealed a significant job growth expectation for young entrepreneurs. More interestingly, the analysis indicated a positive relationship between the educational levels of young entrepreneurs and employment growth.

Blanda and Urbancikova (2019) used econometric models with logistic regression to analyse 132 enterprise representatives' opinions on the impact of Work-Based Learning (WBL) on enterprise performance and effectiveness, employees, apprentices, society, and the business environment in 6 EU countries. Findings revealed that interest in WBL is significantly higher in business cities, particularly in cities where engineering, construction, science, and

communication technology predominate. The WBL strategy benefits enterprises and learners in terms of employment opportunities. This study gives a good insight into work-based learning, but it suffers from not targeting motorbike taxi operators' education and SEW, which was the focus of this current study.

In assessing the ILO training programme in Sri Lanka, De Mel, et al (2012) reported a positive result from women beneficiaries interested in starting a business. Indeed, findings showed that training speed-up the creation of new businesses, which were more profitable. However, training alone did not appear to be enough to get subsistence businesses run by women to grow, although the result was more encouraging for using business training to help women out of the labour force and improve profits and management of these businesses. The study gives an insight into the effect of training on starting a business, but it departs from the present study by not being conducted in the motorcycle taxi sector where this study is based.

In Africa, research on the relationship between education, training, and SEW, enlightened the current study aiming to establish a relationship between education (formal or non-formal such as training) and ZOSEW in Cotonou Benin. The education of lower-status youth in Africa appears to be low due to the limited choices in the education sector as they generally have to do with public education, where classrooms are crowded, teachers overwhelmed, and programs unsuited to contemporary employment and socio-economic issues. As such, students end up with limited cognitive abilities to reason through problem-solving (Filmer & Fox, 2014, p. 80). Nevertheless, the data point out that high education level provides the best job opportunities and better socio-economic opportunities. Resnick and Thurlow (2015) emphasise that the higher the literacy and numeracy, the better the job opportunities.

In this regard, the World Bank (2012) carried out a project with the aim of smoothening young women's school-to-wage or self-employment transition in Liberia. The study used a randomised pipeline research design. This programme increased employment opportunities among trainees due to the acquisition of business development skills as the trainees' monthly incomes increased. The program substantially increased girls' savings as well.

Fiala (2013) adopted a mixed method to research the influence of training on business growth in Uganda. The study paired training with access to finance. A sample of 1,550 individuals, men and women, were surveyed. The findings highlighted the evidence for a positive effect of training when combined with a loan, particularly for men, as there appears to be significant potential for growth. However, women stayed at a local equilibrium for other reasons related to cultural issues.

In the same vein, Blattman et al (2014) reported another project designed for self-employment for income and social stability among poor and unemployed people in Uganda. Recipients were to submit vocational training and business development grant proposals. Each member received a sum of \$ 382. Some of the beneficiaries invested in vocational training, while most invested in tools and equipment. The assessment found that four years later, half have engaged in trade. Many have also formalised their activities and hired labour. The above three studies highlight the positive influence of education, whether formal or informal, on employment and income and the limitations of training alone. However, these studies differ from the present in context and target population.

Non-formal adult education and training aim to meet the educational needs of adults who have not attended school through measures that open up their access to skills acquisition and employment and promote social and economic integration. However, many long-term unemployed adults for lack of marketable skills remain unemployed after completing training programs. To dispel this ambiguity, Mayombe and Lombard (2015) conducted a study to establish the importance of skills in adult non-formal education in finding a job in South Africa. The study also looked at favourable conditions for acquiring skills that lead to employment and ways to help improve outgoing learners' income and self-employment capacities. With mixed methods research design and a sample of 472 participants, the study established that adult training programs focused on activities conducive to self-employment were more likely to promote income-generating skills than programs offering courses designed to gain access to paid employment. Furthermore, a significant relationship was found between the objectives of training programs, financial resources, trainees' selection criteria, training needs assessment, and the acquisition of skills for successful employment outcomes. The finding was that if these internal enabling factors are lacking, there is a risk that learners will continue to face challenges entering the labour market and break the vicious circle of poverty and social exclusion. All things considered, education and training based on well-defined objectives and aligned with the needs of trainees for jobs and instant income opportunities provide better marketable skills to unemployed adults. Although conducted in South Africa, this study is relevant, informing the current study on ways to empower Zem operators with skills to make alternative decisions to improve their SEW.

The studies reviewed above on the relationship between education and its effect on SEW were in line with the study by Adams et al. (2013), who emphasised an apprenticeship as the main source of skills in the Sub-Saharan African informal sector. This study examined the role of education, training, and skills development in labour mobility and earnings attainment in Sub-Saharan Africa, with apprenticeship appearing to be the main source of acquiring practical skills for the informal sector. The study established that education and skills are known not only to play a key role in economic growth but also affect workers' incomes due to their influence on the type of employment and workers' income in this job. Education and training are also drivers of professional mobility and contribute economically to the SEW of individuals in Sub-Saharan Africa. This study is very relevant, although it suffers from not specifically targeting Zem operators in Cotonou, Benin.

In promoting self-employment, entrepreneurship education also plays a key role, especially since this sector strongly contributes to unemployment and poverty reduction. In a study on the capacity of young people to create and develop their businesses and help reduce unemployment, Schott et al. (2015) reported that the youth everywhere are social transformation agents in their living environment. They are creating jobs and providing solutions to social problems. The results of their work show that young people are relatively more likely than adults over 35 to start a new firm. Kew et al. (2015) confirmed this trend when they pointed out that developing countries had more start-ups and young companies than existing ones. Thus, they found self-entrepreneurship among young people as an attractive career option. Indeed, their findings indicated that 60% of young people in developing countries consider entrepreneurship a promising career or occupation. Kew and his companions also stressed that these young people searching for high status in society consider entrepreneurship to be the key.

Yakubu (2012), in a study on the determinants of motorbike taxi operators' earnings in Nigeria, compared their level of education and their earnings per day. Strangely, he established that operators with lower education levels earned high daily incomes compared to those of higher levels. This implied that the level of education did not necessarily determine the performance of the motorbike taxi business in Nigeria. However, concluding that there is no relationship between education and the performance of the Zem business, based on daily income alone, could be a little biased. Indeed, Rugut and Makori (2015) measured the performance of the motorbike taxi business in Kenya based on the criteria of turnover, gross profits per day and growth. The results revealed that operators' level of education and training had a significant effect on the performance of the business. Although these studies are relevant to the present study, they did

not focus on the performance of the motorbike taxi business as this present study. In any case, the influence of education and training on business success and occupational choices calls on theories that shed light on their contribution to a possible reconversion process in the Zem industry in Cotonou.

Indeed, Todaro's approach to the determinants of the choice of employment sheds light on the reasons for the dizzying growth of the Zem industry in Cotonou. In their analysis of the dual model of rural exodus in developing countries, Todaro and Harris relate the economic phenomenon of rural exodus to the economic theory of rationality. Migrants make a rational choice to migrate to urban areas when the expected income in the urban area is greater than the agricultural income in the rural area. Alternatively, the reasons behind the choice of occupations are also based on arbitration on the levels of risk related to the employment sector considered (formal or informal). Getting a stable job in the formal sector seems limited. On the other hand, in the informal sector, jobs are relatively accessible, but incomes fluctuate according to various parameters.

Djossou (2017), in Benin, subjects these two models and argues that they do not consider the socio-professional characteristics of job seekers in the occupational decision choice. A job seeker will not seek employment in a sector where he knows that his professional characteristics do not allow him to meet the technical requirements necessary for the intended job. Thus, the choice between different job opportunities certainly depends on the appraisal of the remuneration offered by the different employment alternatives as stipulated by the models of Todaro and Falcao. Still, workers' personal characteristics such as knowledge, education, technical and professional skills for an envisaged job, age, experience, social position, and networks of relations, among others, are fundamentally decisive in occupational choice.

The assumption about workers' personal characteristics seems to be confirmed by the results of a survey study conducted by the author (Djosou, 2017) in the Zem industry in Cotonou. Among 425 Zem operators surveyed, 64.24% chose the activity because, on the one hand, they failed in the job market, and on the other hand, the Ease offered by Zem activity to find a job. Without focusing specifically on the relationship between education and ZOSEW, this study highlights the reasons for choosing Zem activity. Thus, it sheds light on the source of the issues related to declining income in the Zem industry to predict possible reconversion among Zem operators in Cotonou, which is the focus of this study.

Although self-entrepreneurship was praised by Schott et al. (2015), the issue of self-employment in the Zem transport sector has crossed the boundaries, becoming a real challenge in Cotonou. When young people are encouraged to become self-employed out of necessity, they are likely to be exposed to poor working conditions and to strive for a livelihood. The ILO (2010) has documented this by pointing out that many young people are involved in independent work as self-employed in precarious informal sector activities such as operators in the informal transport sector in Zem. These people work in very precarious employment situations. Further, the ILO advocates support to help them find better and decent work. Youth entrepreneurship can provide decent working conditions and can enhance people's lives in other ways.

2.3.3 Business regulation and Socio-economic well-being

Regulation, in general, refers to tools designed to guide people so as to act according to a regulatory model put in place. In an economic context, regulations are forms of requirements or restrictions that governments, through policy mechanisms, impose on businesses. They impact business processes concerning production, market entry or exit, prices, competition, et cetera. Recognising that regulations are essential for an economy in terms of proper functioning, OECD (2006) argues that state interventions in economic activity are widely in the form of regulation. The laws on job protection, the polluter pays policy in corporate social responsibilities, the obligation to provide accounting information to the State, et cetera., are all examples of regulations. Still, regulation is not only binding. It also aims to improve the economy's performance and social welfare. For example, the polluter pays principle enshrined in the Rio 1992 agreements for sustainable development states that those who produce pollution must assume its cost management to avoid environmental and human health damage. Kitching, Hart and Wilson (2015), supporting the positive effect of regulation, assert that there is no world where regulation only limits companies' performance in a market context. Indeed, for these authors, if the regulation can impose or prohibit the agents' behaviour, it also supports the activities of production exchange of consumption on the markets. Otherwise, these activities could not take place properly.

In the process of investigating the possible economic reconversion of the Zem industry in Cotonou, it is essential, through objective three of this study, to explore the literature on the influence of regulation on the business sector, with a focus on market economies. Fundamentally addressing the importance of rules and their impact on firms, Davis and Ward (2008) refer to

two theoretical approaches to regulation. First, the public interest approach advocates government intervention through regulation to correct market failures. This approach suggests that stricter regulation should lead to better quality products and services, efficient markets, reducing negative externalities, and allowing for more competition. The public choice approach, on the other hand, holds that regulation results in reduced competition and is likely to be a cause of more corruption.

Examining the regulation of firm entry in the light of promoting the public interest and economic efficiency, Djankov et al (2002) used data from a sample of 85 countries and found that stricter regulation of market entry was not directly associated with better quality products, reduced pollution or increased competition. On the contrary, the results show that stricter regulation induces higher levels of corruption and leads to a high level of the informal economy, by public choices of regulation closer to the deregulation option. Nonetheless, these authors concluded that this was not a total refutation of the public interest approach or global deregulation. They suggest a compromise in the usage of the regulation to promote public interest and economic efficiency. Essentially, this study suggests identifying the appropriate contexts for deregulation or removal of regulation, the contexts where regulation plays a significant role in promoting the public interest, and how to best design it in this case.

In the perspective of public interest theory, the OECD (2006) has demonstrated that regulatory policy in the environmental context can work for the public interest. Regarding competition-related regulatory policy, it highlighted the characteristics of environmental regulations that are expected to have a direct impact on entry and exit conditions. The report highlights, among other things, the increase in sunk costs, i.e. the investments required for market entry that a hit-and-run company will not be able to recoup upon exit, which sounds like a market contestability reduction policy. The report also discusses the strategy of cost differences between incumbents and new entrants. For example, the learning curve required to comply with complex regulations may deter entry and limit the intensity of externalities. Similarly, formalities and procedures for obtaining licenses, certification, etc., may reduce incentives to enter a market, thereby limiting the number of firms and thus, *ceteris paribus* (*other things being equal*), the negative externalities.

Ardagna and Lusardi (2008) conducted a study on the role of individual firm characteristics and regulatory constraints using the Global Entrepreneurship Monitor. They found that regulation plays a key role in the choice of a new business to start. Regulation functions, in this case, as a barrier to entry that influences entrepreneurship. In a similar vein,

Ciccone and Papaioannou (2007) also examined regulatory entry delays in business creation rather than costs, focusing on the effects of bureaucracy on the increase in the number of firms and substantial employment in various firms. They found that in places where the registration of new firms takes longer, the growth in the number of firms is also slowed down. These findings are confirmed by the work of Klapper et al. (2006) on "entry regulation as a barrier to entrepreneurship" in different European countries. Using a World Bank dataset, they found that regulation hinders the rate of new business formation. The results of this study also show that stricter entry regulations in European countries are associated with larger firms, highlighting the fact that entry regulations discourage the creation of small firms. These studies inform the present research on the ability of regulation to act as an entry control mechanism in industries or markets, including the Zem industry in Cotonou.

Conversely, these studies have been challenged by Branstetter et al (2014) as to the positive effect of reduced entry regulation on firm entry and job creation. In fact, a connection with the number and quality of firms and jobs created is not reflected in these studies presented in the previous paragraph. To fill this gap, Branstetter et al. (2014) used employer-employee microdata from Portugal to analyse the effect of the deregulation policy on entry. Significant effects on start-up entry and a statistically significant increase in the number of new businesses and jobs created were observed. The country moved up 80 places in the World Bank's Doing Business index. However, the new businesses created were low-tech, run by inexperienced entrepreneurs, and less likely to survive than businesses created under higher barrier conditions. The overall social gains from the reform are limited by the quality of the firms it created.

Nevertheless, through "Doing Business indicators" and other control variables, Messaouda and Teheni (2014) further emphasised the relationship between economic growth and business regulation, based on research they conducted over a period covering 2007-2011 in 162 countries. Except for cross-border trades and building permit processing indices, the study found that most regulation indices positively correlate with the average growth rate. These results are consistent with the findings of research by Djankov et al (2018), which argues for an association between business-friendly regulations and economic growth that can influence the poverty headcount downwards.

Disentangling the link between business regulations and their enforcement, and the poverty headcount, Djankov and his colleagues sought to find the correlation between business-friendly regulations and the poverty index, at the country level. While many studies including

Banerjee and Duflo (2011) have associated poverty with socio-economic characteristics of households such as size, dependency, gender of the head of household especially women, employment status, education level, ownership, etc. number of research referred to macro-level issues. As such poverty was associated with governance quality, vulnerability to natural hazards and calamities such as floods or tropical diseases, etc (Dollar, Kleineberg & Kraay, 2016). Others have associated poverty with the issues of infrastructure (electricity, water, roads, etc), health, education and other services, social relations, and market opportunities (Kraay and McKenzie, 2014).

Examining the issue from another approach, Djankov and his companions adopted the regulatory model to test the existence of a potential link between poverty reduction and business-friendly regulation. To that end, they tested the hypothesis of an association between poverty reduction at the country level and the ease of doing business using the overall Doing Business index, as well as the separate measures on starting a business, acquiring licenses, getting credit, and enforcing contracts. They first demonstrated that business regulation is strongly correlated with new business creation and then showed that new business creation is negatively related to poverty, although the latter is statistically insignificant. The study showed empirical support for the association between poverty headcount and business-friendly regulation, and the likely conduit for this association is through the creation of new businesses that generate jobs and economic opportunities for the poor.

Kitching et al. (2015) also researched the effect of regulation on small businesses, interviewing 124 business managers. Through in-depth investigation exploring the perceptions of managers on the effects of regulation, they provided the empirical basis for the general conception and effect of regulation on performance beyond the burden, costs, or constraints usually associated with regulations. The results show that regulation's influence depends on how small businesses' agents and partners they interact with adapt to regulations. They concluded that regulation exerts various dynamic influences on the performance of the activity of small businesses that businesses adjust to the regulatory environment not only by complying with it but by acting beyond it. With this regard, the idea that regulation hinders the performance of the business must be excluded, because new market opportunities and product innovations leading to higher performance levels emerge due to regulation. Further, they argue that policymakers should have this in mind when designing and enforcing regulations and design support for small businesses. It is also essential to look at some studies conducted in the field of regulation at the African continent level to give better insight into regulation in Benin.

As such, in Africa, Bensassi et al. (2019) conducted research on "regional integration and informal trade in Africa: Evidence from Benin's borders". The study used the survey on informal trade at the borders of Benin, conducted by the Institute of Statistics in Benin, to test the relationship between informality and trade barriers. The results show the extent of informal flows and various products, all of which are under-reported in official West African Economic and Monetary Union (WAEMU) trade data. The results reveal a positive semi-elasticity of informality compared to tariffs, as a 10% increase in tariffs on a given product makes it about 12% more likely to be imported informally rather than formally. Non-tariff measures also increase informality, with an ad valorem equivalent of around 20% for SPS measures. Perishability also plays a role in informativity, suggesting that time, considered a trade barrier, affects informality preference. The results also show that informality perseveres within the West Africa Economic and Monetary Union for local products that are not subject to any tariff. The study recommends a review of the high compliance costs, in terms of delays or certification costs, which also play a role in the magnitude of informality as a reduction in these costs should benefit well-being. Ultimately, results reveal that informality is not only due to fares and regulations but also compliance costs. Thus, this study is relevant for the current research on Zem business which is also part of the informal sector activity carried out in the same region, West Africa, Benin.

Regarding regulations of the motorbike transport industry, Cervero and Golub (2011), estimated that the industry is subject to regulation by public authorities to some extent in all countries. As the number of motorbikes and motorists increases, the challenges of externalities, including accidents, injuries, and fatalities, also increase (Sisimwo, Mwaniki & Bii, 2014). Thus, regulations and rules come into play in many African countries to reduce the accident rate. A study conducted by Kumar (2011) on "Understanding the emerging role of motorbikes in African cities" revealed that only 18% of motorbikes were eligible for registration. Consequently, attempts to reduce the number of Zem industries result in falsified certificates. As such, the restrictions do not reduce the number of Zem industries. On the contrary, they lead to an increase in the number of unsafe operators. This regulatory weakness was noted in a study by Muguku (2010) on injury patterns among hospitalized motorcyclists in Nakuru, Kenya. According to the author, despite regulatory measures to reduce motorbike accidents, accidents continue to increase. These uncertainties about the expected effects of regulation raise the issue of the quality of business regulation instruments, especially with regard to the specificities and peculiarities intrinsic to each sector, notably the informal business sector.

In Benin, however, as a member of the UEMOA space, the country has been committed since 2013 to implementing the entrepreneurship regime provided for by OHADA (Organisation pour harmonisation du Droit des Affaires en Afrique). This measure aimed to encourage small entrepreneurs to enter the formal sector through a simplified process. It is a package of incentives that includes support for the formalisation of entrepreneurs, capacity building for entrepreneurs, a tax system adapted to entrepreneurs and facilitating access to financial services. In this respect, the business environment in Benin has improved in recent years. This is evidenced by the progress made in the World Bank's Doing Business ranking since 2014. Nevertheless, the informal sector, which accounts for 90% of the private sector, still complains about the lack of mechanisms to identify promising opportunities, access credit, develop business and deal with tax administration and competition.

Some light on this state of the business environment in Benin came from a study commissioned by the African Development Bank Group (AfDG, 2019) as part of the implementation of the 2017-2021 Country Strategy Paper for Benin, examining the business environment in Benin. It was a survey of various stakeholders' perceptions of the state of the business environment aimed to improve the conversation on the private sector in the country. The study reviewed the literature and exploratory interviews to design the interview guide and cross-reference the responses with previous surveys on the subject. One hundred questionnaires were administered to enterprises (formal and informal), banks and financing institutions, technical and financial partners, and public structures. The results revealed that access to finance is discouraging due to the complexity of procedures and guarantees required to access credit. Dissuasive access costs and the price of electricity, as well as frequent blackouts, remain obstacles to business creation and development. Most respondents believe that the business environment in the informal sector has not improved as their prospects for formalisation remain problematic with the lack of guidance on accessing credit, developing business, dealing with the tax authorities, and dealing with competition.

From the analysis, it emerges a real discrepancy between the efforts made and the results obtained in terms of improving the business environment, and the feelings of the main actors in the private sector, mainly those in the informal sector. Thus, the discourse on the importance of the private sector in the creation of national wealth and the actions and public policies to support this sector seem to be out of step. There appears a kind of inability on the part of the administration to implement the recommendations of previous studies and consultations, and the absence of effective control mechanisms. Ultimately, the impression is that the government has no real supportive policy for the informal sector.

To improve the business environment, the study recommends the support of international organisations to the government. This should aim at sustainable solutions to problems related to entrepreneurship development, the creation and expansion of enterprises, the development of new products and services, and new markets. Although very relevant for this study, the study on the business environment in Benin did not consider Zem's specific business sector. No Zem operators appear to have been approached by the study, as evidenced by those interviewed for the study. This could reflect, albeit with a bit of restraint, the neglect of the Zem business sector in formalising the informal sector, in spite that Zem sector provides more than 75% of jobs in the informal sector. The fierce competition in the Zem market, the negative externalities associated with this trade such as accidents, air pollution and associated respiratory diseases, as well as the general decline of the Zem economic model, as far as profitability is concerned, could be the result of the absence, or lack of enforcement, of appropriate business regulations in the sector.

Regarding, specifically, the regulation of the economic activity of Zem transport in Cotonou, the 2015 report of the Road Safety Authority in Benin (CNSR, 2015) called for the regulation of the economic activity of Zem transport in Cotonou, in line with Avocè Viagannou (2011) who has also emphasized the need for this industry regulation, pointing out that the industry is to blame for accidents, air pollution and associated illnesses, in the city of Cotonou. According to Assouma (2019), the city of Cotonou indeed is facing serious environmental pollution due to the uncontrolled and uncompressible increase in the number of Zem operating in Cotonou. As a result, strict regulation of the Zem industry would not be optional for either the national or the municipal authorities.

Drawing attention to the socio-economic well-being of Zem transport service suppliers, Djossou (2017) stresses that given the risks associated with this activity, it should be carried out over a short period of time to minimize the risk of disability to which the operators are exposed and its corollary of poverty into which their dependents could fall. In this respect, the author wonders, whether Zem operators manage to improve their socio-economic well-being over a short period of time through the income from their activity. Otherwise, regulatory policies would have to be found to lift them out of precariousness as they face the risk of illness and poverty in old age. Ultimately, the occupation needs to be regulated, such as by controlling competition in the field and setting a retirement age limit.

2.3.4 Access to finance and Socio-economic well-being

The literature indicates that reforms to promote economic growth have been undertaken as a poverty reduction strategy. However, the impact of these reforms, particularly the development of the financial system on the poor remains uncertain. For example, the high costs associated with small loans are inaccessible to the poor, limiting their access to financial services. In sub-Saharan Africa, the problem lies in the distribution of income, which tends to favour a wealthy minority who appropriate the benefits of economic and financial reforms. Nevertheless, access to financial services remains central to poverty reduction strategies (Kiendrebeogo & Minea, 2013), as the literature documents.

In this regard, whether households are poor or well-off, credit makes a positive and significant contribution to their SEW in terms of per capita expenditure, food expenditure, and non-food expenditure. This is the conclusion of a study conducted by Quach *et al.*, (2005) using an econometric model to analyse the effect of household loans on their SEW in Vietnam. They found that the age of the household head, household size, land ownership, savings, and credit availability in the neighbourhood are essential factors that affect household borrowing. Therefore, the availability and easy access to credit facilities increases household welfare and spending power and opens them up to a range of business opportunities in terms of alternative income-generating activities such as small businesses. Thus, access to credit facilities promotes the overall SEW of these households.

Deciding first on a definition of access to finance and its various measures, Bae et al. (2012) adopted econometric methods to examine the impact of access to finance on income inequality and the level of poverty in America. Then through various measures of income inequality and the poverty rate, the study adopted a panel regression using a fixed-effect model to test the effect of access to finance on income inequalities and poverty. The results show that access to finance positively reduces income inequalities and the poverty rate. Stressing the need for further study to ascertain the effects of access to credit, the study, on the other hand, recommends effective policies to improve access to credit for the poor as part of poverty and socio-economic inequalities reduction.

In North Africa, Bzeouich (2019) also conducted a study to assess the effects of microfinance on beneficiaries' social and economic status. The study was carried out with a sample made up of three groups: a group of beneficiaries who received the support of an NGO, another group of beneficiaries who received the support of an association, and then a third one

which was a control group. In adopting the evidence-based approach (counterfactual approach), the study compared the situation of microcredit beneficiaries to the control group to see if there was an improvement in their SEW. The empirical results confirm the findings of previous studies on the positive effects of microfinance on the SEW of beneficiaries. The substantial increase in household spending, access to health services, education of children and improvement of housing conditions have been empirical evidence demonstrating these positive effects of access to microfinance on the SEW of beneficiaries.

Similarly, Wale and Makina (2017) also researched account ownership and use of financial services among individuals: Evidence from selected Sub-Saharan African economies. This study focuses on the ownership of financial accounts in Sub-Saharan Africa, considering age, sex, income, and level of education. Econometric tools, particularly Probit and sample selection models, were applied to World Bank's Global Findex database. The results revealed that account ownership and use is higher among males, high-income, or most affluent, middle-aged, and educated individuals. On the other hand, the marginal effects of income and education are more significant. The study, therefore, suggests policy action geared towards the poor and less educated people to reduce the level of financial exclusion in sub-Saharan Africa.

Obamuyi (2017) conducted a study on the importance of start-up financing to promote expectations for growth in the Enterprise. The purpose was to examine how age and financing affect expectations for growth enterprises in Sub-Saharan Africa. Adopting multivariate linear modelling, the study revealed that the very young below 25 years have higher growth expectations but less financing than young adults aged 25 years. The study concluded that policy aiming at providing more financing for very young entrepreneurs could lead to more expansion and job growth.

Nyangoma (2014), in a study, carried out in Kampala on loan terms, access to finance and SME financial performance, revealed an important positive association between loan terms factors, access to credit and SMEs' economic performance. Gitonga (2014) found in Embu (Kenya) that with the efforts of motorcycle production companies offering financing offers, there is a good chance that the number of motorcycles will increase in Kenya. Indeed, this mode of transport has been observed in the country due to these offers and financing options.

In West Africa, Koloma (2019) conducted a study on microfinance and poverty reduction by gender in Mali. An econometric method known as the Heck-man selection model (ETH, 1979) was applied. The findings from this Heckman treatment effect model confirm those already obtained in previous studies, namely, access to microcredit contribute more to reducing

poverty among women than among men, probably due to the longer participation of women in microfinance programs. The study recommends encouraging microfinance to reduce gender poverty, but much better by supporting it with a major program such as education. However, a financial inclusion policy must consider programs oriented both towards women and men so that the effects become more important. This study informs the current one on the reconversion of Zem operators in Cotonou regardless of gender to improve their SEW.

Ampah *et al.*, (2017) studied the effect of access to credit and financial services on poverty reduction in Ghana from the perspective of SMEs. The findings revealed a relatively small positive effect of access to financial services on income growth, increased consumer spending, and business advantages. On the other hand, access to financial services has a significant effect on the capability to educate children. The study found that SMEs have a significant contribution to the growth of the economy and the reduction of poverty.

In Benin, Sossou *et al.* (2014) analysed the structural, behavioural and performance factors determining access to credit for farmers in Benin. A binomial logit econometric method was used to analyse data from 475 farmers surveyed. The findings revealed that household size, proximity to microfinance institutions (MFIs), membership in a financial solidarity group (FSG), and income level influence farmers' access to credit. Nevertheless, the marginal effects of proximity to MFIs and membership in an FSG are likely to significantly increase farmers' access to credit. Therefore, improving the coverage rate of MFIs in Benin and raising awareness among farmers on organisation and/or joining FSGs are essential. As a contribution, Akpa *et al.*, (2020), in a study on the relationship between financial inclusion and agricultural production, find a significant positive relationship between access to financial services and agricultural production in Benin. In contrast, financial services have an insignificant positive effect on agricultural production. Hence the improvement of financial inclusion is necessary to facilitate the access of peasant households to inputs and consequently to push up both agricultural production and the income of peasant households.

Looking at socio-economic situations similar to those of Zem operators in Cotonou, there is a study conducted by Allassane (2021) on the financial inclusion of the unemployed and underemployed in Benin. Based on a sample of 212 respondents and using Multiple Component Analysis and a logit regression model, his research reveals that financial services, education level, gender, and age, influence the financial inclusion of unemployed (and underemployed)

people in Benin. Thus, improving the level of financial inclusion through youth entrepreneurship, access to education and awareness of the usefulness of financial services are recommended to improve the socio-economic situations of unemployed and underemployed youth in Benin.

All these studies provide a more optimistic view of the positive effect of access to finance on SEW. But the use of a limited number of observations or data limited to given geographic areas does not provide concrete information on the specific context of Benin and on Zem's access to financial services in Cotonou. This study intends to test Zem operators' access to finance and how that could influence the improvement of their SEW.

2.3.5 Economic and Occupational Reconversion

The concept of economic reconversion was the intervening variable in this study. This concept appeared in the aftermath of World War II with the necessity for the State to find jobs for people employed by war and give a new economic vocation to war production industries. Broadened later and referred to adjustment to a new economic environment (De Lille, 2007). According to Fontan and Klein (2003), economic reconversion is imposed by necessity and conditioned by economic imperatives. Reconversion is also applied in the occupational context as a response strategy to job insecurity, particularly in the informal sector. Thus, individuals go through vocational education and training that empowers them with the skills, creativity, and innovation they need for job-seeking or career change (Blustein *et al.*, 2015). Indeed, unpredictable changes in the world of work, precariousness, insecurity, disqualification, social marginalisation, and economic exclusion (employment, housing, finances) create the need for reconversion in the spirit of pro-activity, innovation, creativity, and adjustment to change (Michonova, 2008).

Although the economic reconversion in the Zem activity sector also consists in regulating this transport industry, it primarily targets the work of operators to improve their living and working conditions. From then on, it refers, among other things, to the possibility of job changing. Many studies have tried to shed light on the phenomena of professional reconversion. Thus, the literature informs that reconversion is linked to the occupational trajectory, including unemployment and private life events that can trigger in the individual a desire to change occupation or income-generating source. Even a priori simple events can accumulate, leading to professional and identity questioning (Denave, 2015).

According to Fournier *et al.*, (2017), professional reconversion can be voluntary, that is, at the initiative of the individual if he is dissatisfied with his job and feels, for example, a routine, a loss of interest, the desire to meet other aspirations and challenges, or simply the desire to be in accordance with one's personal values. The authors clarify that reconversion can also be involuntary; it can also be caused by structural constraints such as unemployment, downgrading, and precariousness. Thus, involuntary reconversion can be caused by external economic motives in the labour market context.

Research by Masdonati *et al.*, (2017) on adult reconversion targeted people enrolled in a vocational training program to change careers. Semi-structured interviews were conducted with 30 adults aged 25 to 45. This qualitative study shows that the participants reoriented their careers according to various motivations. Still, two central dynamics underlie career changes, namely a proactive approach on the one hand and a reactive approach on the other. Reactive approaches are often due either to a health problem or personal dissatisfaction. As for proactive approaches, the study reveals that they are generally guided by three categories of reasons: the desire to achieve better working conditions, the search for personal development, and the desire to have an occupation that corresponds to the person's vocation. The study argued for the importance of understanding the subjective reasons that motivate job changes to adapt specific career change interventions accordingly.

Treuren (2013) studied the relationship between perceived job alternatives, employee attitudes and leaving intention. The study adopted a survey design and used a quantitative approach to collect data which were analysed using ordinary least squares, multiple regression, and analysis of variance (Anova). The study tested two hypotheses on intention and leave. The first hypothesis sought to determine whether employees who believe another job is available are more likely to report higher levels of intention to quit than employees who perceive lower levels of alternative employment. According to the study, job dissatisfaction is not related to the perception of alternative jobs. At first glance, it is unlikely that workers' perception of the availability of alternative jobs is influenced by the intention to leave. More opportunities for alternative jobs sharpen the willingness of employees to quit their current job. The second hypothesis tested whether employees who want to leave but cannot show less commitment than those who are more confident in their plan to change. The study found no causal relationship between employees' attitude at work and their perception of job alternatives for their change. If the performance of employees with the willingness to quit is low, this is not due to the impression of not being able to leave, but probably that these employees were already unsatisfied with their job.

Kay (1997) mentions that this strategy was adopted due to competitive pressure resulting from lower tariffs, with many small farmers unable to survive. First and foremost, this conversion was aimed at all producers. Then, a special feature was given to the regions with the most difficulty meeting the competition challenge. The government has targeted farmers for special assistance in this conversion process. Indeed, the reconversion program has been limited to those whose income is mainly derived from agricultural and animal production on the farm and who provide them with at least a minimum annual income. Thus, the reconversion process is considered a vital distinction between viable, potentially viable and non-viable with small-scale agriculture, that is, those whose agricultural units have a minimum productive potential to be viable as agricultural producers. The categorisation of the beneficiaries of this reconversion made it possible to realise that half of the peasant units were too small and generated too little agricultural income. Therefore, having few resources to make a significant adjustment in their production process to secure their future as producers, these poorer peasants are classified as having to engage in non-agricultural activities and/or seek salaried jobs. Although targeting peasant agriculture, this reconversion process sheds light on this study which envisages a reconversion process in the industry from Zem to Cotonou.

In Africa, tendencies, and intentions to embark on professional reconversion appear, as do 75% of Zem operators in Benin expressing their willingness to change occupation (Lawin et al., 2018); but the lack of social protection and the risk of re-qualification would be a serious brake on migration to self-employment, despite the pre-eminence of the informal sector in African economies. Also, finance for reconversion activities remains a constraint that pushes people to be content with their precarious working conditions rather than embark on uncertain adventures. Another major obstacle to professional reconversion in Africa is the difficult conditions to access finance for professional activities, often beyond the reach of people who desire to reconvert. However, there are an increasing number of isolated cases of the African diaspora returning to invest in their country, provided that the business environment is conducive.

Regarding the reconversion of Zem operators in Benin, there are more and more examples of reconversion towards alternative activities and reconversion to public or private services for former operators who exercised the activity as a temporary job while waiting for a more decent job. The steadily increasing unemployment rate in Benin worries public authorities and researchers. Coovi and Noumon (2020) conducted a study to analyse factors affecting the socio-professional insertion of the youth in Benin. Public service agents for employment,

recruitment professionals, and young people who have or have not succeeded in their socio-professional integration have been purposively selected for the study. A semi-structured interview guide and survey were used to collect data from 27 respondents. The results highlight institutional barriers, the mismatch between education/training and labour market requirements (university-industry linkage), lack of resources and creativity for self-employment, lack of courage among young people to embark on the entrepreneurial adventure, et cetera., as internal and external factors affecting youth employment. This challenges young people on the one hand for their lack of creativity and initiative, and on the other hand, the public authorities and education experts to adapt education and training programs to the needs of the labour market.

Concerning factors related to political change and its effects on poverty, Djankov et al. (2018) attempted to study the relationship between business regularisation policies, access to credit, and poverty. Testing the effects of political change, the study used the holding of elections as the main explanatory variable and considered whether these elections lead to a change in control of parliament from one party or party coalition to another. The study constructed a proxy for the change in political power named PolChange. Then it used general government expenditure as a share of GDP, constructed by the International Monetary Fund.

The data suggest that these changes in power vary considerably across countries by income group. More than sixty percent of the policy changes over the sample period occurred in upper and upper-middle-income countries, while only twelve percent of the changes occurred in lower-income countries. Wealthier countries have a lower incidence of poverty, and countries that spend more on public services as a percentage of their GDP also have lower poverty rates. Public spending on health and education, for example, is also correlated with poverty incidence.

The study also examined the association between poverty reduction and Ease of doing business by considering four measures (the difficulty of starting a business, acquiring licenses, obtaining credit, and enforcing contracts). The data is constructed from the World Bank's Doing Business and covers 189 economies from 2005 to 2013. The finding was that business-friendly regulations are correlated with the country-level poverty index. The study suggested that this relationship is mediated by increased rates of new business formation in countries with improved regulations, which association is mediated by the creation of new businesses that generate jobs and economic opportunities for the poor.

Further, the study found that business-friendly regulations correlate with a lower incidence of poverty, as do higher public expenditures and higher per capita income. The conclusion was that poverty reduction could be achieved through enterprise creation, both as a

source of new jobs and as a result of flourishing entrepreneurship. Although it was not conducted with a view to alternative employment opportunities that could help reconvert Zem operators in Cotonou, this study provides information on the conditions set by some operators who feel that they are ready to leave the Zem sector provided they find other employment opportunities.

A number of studies have targeted the reconversion of specific socio-professional groups and the reconversion processes: reconversion of nurses (Gillot & Lanoë, 2011), reconversion of high-level athletes (Navel & De Tychey, 2011), and reconversion of executives into crafts (Jourdain, 2014). It should be noted that reconversion in the informal sector has not yet been addressed, much less the reconversion of informal motorcycle transport operators in Benin. However, the government of Benin adopts the terminology "reconversion" to express its intention to clean up the Zem industry in Cotonou. However, they have not clearly defined the process, the incentives for voluntary retraining, or the measures for involuntary retraining. These are all perspectives that this study has considered.

About the Zem industry in Cotonou, economic reconversion is conceptualised in this study as strategies to empower Zem operators for better working and living conditions, for better managing and diversifying their income sources, including the ability to find alternative sources of income to avoid relying on Zem as the only source of income. Essentially, the reconversion aims to allow Zem operators to adapt to increasingly fierce competition, the more dynamic market in which they operate, security issues, and other challenges. The conversion aims to help Zem operators to be proactive in seeking alternative occupations to the economic activity in Zem. This will enable them to be better equipped to deal with shocks due to events beyond their control, such as Covid-19, which crippled their sources of income, as social distancing is not applicable on a motorbike.

2.3.6 Market and State-induced Reconversion

With the emphasis on the reconversion to peasant agriculture being producers with chances of success, the fates of the poorer fringes of Chilean agriculture were left to the care of institutions with poverty reduction programs. A contraction by the market could shift the lines if employment opportunities become more favourable with higher wages, and emigration from small farming communities where poverty is concentrated could occur. This would lead to a total reconversion of agriculture and a reconversion outside of agriculture. In turn, a substantial increase in wages and farm incomes would reverse the trend. Hence the game of the market could be controlled by the government to ensure a balance that could reduce poverty and the gaps between social strata.

Reconversion in the agricultural sector in Latin America highlights the transition from market-induced reconversion to reconversion through state mediation. This reconversion consisted of improving the land-use model (by farmers), switching from less to more profitable productions to reduce dependence on certain crops, introducing alternative income-generating activities, and the option for jobs in other sectors. In this process, Kay (1997) states that peasants' ability to adjust varies depending on technical knowledge, entrepreneurship, and others. Thus, to improve peasants' income and living conditions, the State has introduced the reconversion with support measures such as technical assistance, training, access to credit, the market, and support for farmers' unions.

2.3.7 Socioeconomic Well-being among informal workers

Competitiveness as a global issue nowadays is considered a means to foster economic and sustainable development and serve better the interest of consumers in terms of ratio quality/price. However, intense competition impacts the likelihood of suppliers' revenues dipping downwards, affecting their SEW (Kordestani & Mohammadi, 2016). As essential items are commodities in urban areas, income is crucial as a vital component of the SEW of poor urban dwellers. Low-income households cannot save money to be able to face socio-economic shocks. Thus, they must borrow money or deal with inadequate medicines sold on the streets when they face a health emergency. However, poor health, disability, or in the worst cases, the death of the main income earner plunges families into precariousness, children drop out of school, living conditions worsen, and families end up locked in the vicious circle of poverty. In a study conducted on road transport workers in Pakistan, Hisam (2006) revealed that the informal transport sector is weakly regulated, and the working environment is excessively competitive. As such, operators face low income, extended working hours, disastrous working conditions, health risks, and without social protection.

Spooner (2011) emphasized that in most developing countries, informal transport operators, like others in the informal sector, do not benefit from adequate social protection in terms of retirement pension, health care, life insurance, and others, commonly tied to formal employment. In countries where the situation has improved, and informal workers are qualified to join the government social protection system voluntarily, few enrol for costs beyond their financial capacity. So, informal workers live precariously, and any ill health or an accident can plunge a whole family into disaster.

In Benin, only workers in the public sector and those in private companies affiliated with the National Social Security benefit from social security coverage. However, to open social protection to self-employed workers, agricultural workers, and workers in the informal sector, the government has established a social welfare mutual insurance office by decree N ° 2013-135 of 20 March 2013 (ILO, 2019). Still, according to the State Development Plan 2018-2025 (PND) cited by Mohamed Aboubakari et al., (2019), up to date only 8.4% benefit from health insurance, and informal sector workers, representing 80% of the active population, are still excluded. Moreover, the allocated budgets for social protection are declining. The weight of social protection budget allocation in the GDP fell from 1.9% in 2017 to 1.3% in 2019 and the weight of social protection expenditure in the GDP fell from 1.8% to 1.7% in 2018.

Paradoxically, the report specifies that the pension scheme for civil servants consumes 50% of resources for social protection, which means that the vast majority of the informal sector, including Zem operators, is still very poorly covered or excluded from social protection. A glimmer of hope for Benin citizens, however, is that a pilot phase of Insurance for Human Capital Strengthening, consisting of health insurance, education, access to credit and pension insurance, was implemented in 2019 for the poorest in the informal sector (Le régime béninois de sécurité sociale, n.d.). Sommers (2012) argues that income in the informal sector is not stable, and since the bulk of motorbike transport operators come from this background, they continue to suffer from income insecurity. Bonner (2006) added that Zem operators risk ending up in poverty at their old age like the majority of workers in the informal sector, as they seem to be excluded from pension schemes reserved for workers' informal sector, and in some cases, they are eligible for it but are unable to afford it. As operators are not compelled to save money, the likelihood of financial insecurity in retirement hangs over them and exposes them to shocks and stresses arising from their work, except in sporadic cases where an individual adopts financial self-discipline to save either in pension plans or other resources (Sommers, 2012).

Somaratne et al. (2011) define SEW as the level of satisfaction individuals perceive and the social and economic norms they enjoy. However, well-being is described as multidimensional, encompassing education, health, feelings of economic and social security, material standard of living, natural living environment, and social relations, among others (Naradda Gamage et al., 2017).

According to Li et al. (2009), SEW is largely influenced by social, economic, and human capital resources. Thus, indicators such as income, political power, individual health, access to resources, and level of education, serve to measure it. They also point out that since the ideal would be a high level of SEW, certain factors appear to adversely affect the well-being of individuals, especially vulnerable communities unable to cope with socio-economic shocks. In this sense, the nature of Zem activity exposes operators to shocks relating to their health, security, income and savings, which influence their SEW (Spooner, 2011). In this context, ZOSEW in this study would be operationalised as operators' level of satisfaction with their access to health care, social protection, income, and savings. This study envisages that economic reconversion in the Zem industry could provide access to favourable conditions which would improve the SEW of the operators in Cotonou.

Table 2.1: Systematic Literature Review

Studies	Methodology	Findings	Gaps
Industry Structure (entry/exit)			
Blazkova (2016): Relationship between profitability and firm characteristics and industry characteristics in the Czech food processing industry	Empirical ROA analysis on 622 firms – CR4 concentration ratio was used	There is significant positive relationship between market concentration and companies' profitability	This study does not address the structure of the Zem industry.
Heger and Kraft (2008): Barrier to entry and profitability	Data from surveys to study the effect of the threat of entry (subjective Meth)	A significant negative effect of the threat of entry on the profitability of companies	The study was not conducted in Zem Industry
Cowie (2011): Contestability in bus markets - evidence from the British deregulated market	90 Bus markets tested for contestability, through fares, profits, and efficiency analysis	There is evidence of contestability in the transport industry, but not widespread (limited to 15 markets only)	Not addressed contestability in Zem Industry industry
Graham, L., Williams, L., and Chisoro, C. (2019): Barriers to the labour market for unemployed graduates in South Africa	Mixed-method research design with a sample of unemployed graduates	Lack of relevant work experience, limited information on efficient job search, low social capital, and high costs of work-seeking, create obstacles to securing jobs.	This study does not address Zem operators occupational reconversion
Kaunyangi (2014): the impact of competition on performance of firms in the mobile telecommunication sector in Kenya	Descriptive R. Design: to answer the question, how competition affects the Performance.	New entrants, rivalry and buying power affect the performance of companies in the industry	The study was not conducted in Zem Industry
(Djossou (2017): Risk analysis and determinants of the choice of motorbike taxi activity in Cotonou - Benin	Quantitative Survey and 425 motorbike taxi operators surveyed (econometric model)	<ul style="list-style-type: none"> - 238 ZEM INDUSTRYOs entered the activity because of lack of job, and/or the ease of entry. - Risk incurred is high compared to the income. 	Not adopted the approach of industrial structures.

Education and Socio-economic Well-being

Jenkins and Wiggins (2015): Pathways from adult education to well-being: The Tuijnman model revisited	Structural Equation models (SEM)	Midlife education influences the type and quality of jobs available to individuals and in turn, this contributes to higher well-being.	Conducted in UK, this study differs in terms of context and target population.
Blanda and Urbancikova (2019): Industrial profiles of cities and interest in work-based learning	Econometric models	WBL benefits learners in terms of employment opportunity. Business cities with engineering, construction, science and technologies generate increased interest in WBL	The study does not address Zem operators education and socio-economic well-being
Mayombe and Lombard (2015): How useful are skills acquired at adult non-formal education and training centres for finding employment in South Africa?	Mixed-methods research design, with 472 participants	Education and training tailored to trainees' need for employment opportunities and immediate income generating activities better serve unemployed adults.	This study does not target Zem operators.
Fialy (2013): Stimulating microenterprise growth: results from a loans, grants and training experiment in Uganda. Grants and Training Experiments in Uganda.	Survey mixed method	The findings highlight evidence for a positive effect of training when combined with a loan	The Context and the target population differ
Rugut and Makori (2015): Determinants influencing the performance of alternative public transport in Kenya: a case of a motorcycle, Nakuru county	Mixed-method research	Education and skills of motorcycle operators were found to have a significant effect on the performance of motorcycle business.	Does not consider the socio-economic aspect of the operators.
(Djossou (2017): Risk analysis and determinants of the choice of motorbike taxi activity in Cotonou - Benin	Quantitative Survey study	Zem operators make their occupational choice, also on the basis of their qualifications and skills.	This study does not specifically address Zem operators' socio-economic well-being

Business regulation -- Access to Credit

Klapper et al (2006): Entry regulation as a barrier to entrepreneurship.	Entry is measure as the ration of new firms to the number of firms in the industry and is regressed on dummy variables o industry and country	Costly entry regulations slow the growth of the number of businesses.	This study does not address the performance issue in the Zem Industry industry.
Kitching et al. (2015): Burden or benefit? Regulation as a dynamic influence on small business performance.	Documentary analysis	The influence of regulation is mainly how people adapt to it. The regulation does not necessarily hamper the performance of companies. Regulations also opens up new market opportunities, product innovations, etc.	The study does not address regulation issue in the Zem industry
Messaouda and Teheni (2014): Business regulations and economic growth: What can be explained?	Doing Business indicators, and a set of control variables, in 162 countries over 2007-2011	Good business regulation is associated with higher economic growth	The study adopted a broader perception of business and no focus on small businesses.
Cervero (2000): Informal Transport in the Developing World	Survey mixed method and secondary data (investigation, interview, secondary data)	Entry regulation helps to control competition and over-supply in ZEM INDUSTRYI. Regulation and training policy can help Zem operators to increase revenue as well as social protection, through safety and insurance coverage, and other social facilities	The study adopted Global portrait and policy of the informal transport. There is no focus on regulation in the Zem Industry.
Shabbir and Jalal (2018): Higher Education as a Predictor of Employment: The World of Work Perspective	-Survey Research, (1210 participants) - Statistical techn: multiple regress, correlation, t-test, and ANOVA.	Education policy: Positive relationship between higher education and employment: higher education strongly affects and applied as predictor of employment.	Education and training are necessary for job seekers. But the issue was not addressed in Zem Industry
Ampah et al. (2017): Effect of Access to Credit and Financial Services on Poverty Reduction in Central Region of Ghana	Cross sectional study with questionnaire and data from 370 entrepreneurs of micro, small, and medium Enterprise.	Financial services, including access to credit, significantly affect incomes and poverty indicators such as children education.	The study does not address credit facility and policy in Zem Industryi
Bensassi et al. (2019): Regional integration and informal trade in Africa: Evidence from Benin's border	Survey on informal trade at the borders of Benin	Not only tariffs and regulation contribute to the informality, but their compliance costs also weigh on the economy	Study not done in the sector of motorbike transport

Occupational Reconversion

Masdonati et al (2017): The Reasons behind a Career Change through Vocational Education and Training.	<ul style="list-style-type: none"> - Semi-structured interviews with a sample of 30 adults - qualitative study 	<ul style="list-style-type: none"> - Participants reoriented their careers according to various motivations. - 2 main dynamics underlie career changes: proactive approach and reactive approach 	The study does not investigate Zem operators' potential occupational reconversion.
Treuren (2013): The relationship between perceived job alternatives, employee attitudes and leaving intention	<ul style="list-style-type: none"> - Survey quantitative design - Ordinary least squares, - Multiple regression, and - Analysis of variance (ANOVA). 	<ul style="list-style-type: none"> - Positive relationship between perceived alternative job and willingness to change job - No relationship between employees' attitude and alternative job opportunities. 	This study does not address alternative jobs issue for Zem operators.
Fournier et al., (2017): Career change process of workers in contingent professional paths: between occupation bereavement and desire to reinvest one's life differently	-Thematic analysis	Reconversion has a voluntary nature, but it is not so voluntary in the end. Occupational pathways and context influence the decisions of reconversion. Expectations are diverse and differentiate the purposes of reconversion. The outcomes of the reconversion are unpredictable, although necessary to find meaningful job.	Socio-economic context considered in this study is different from the context in Cotonou, Benin.

2.4 Research Gap

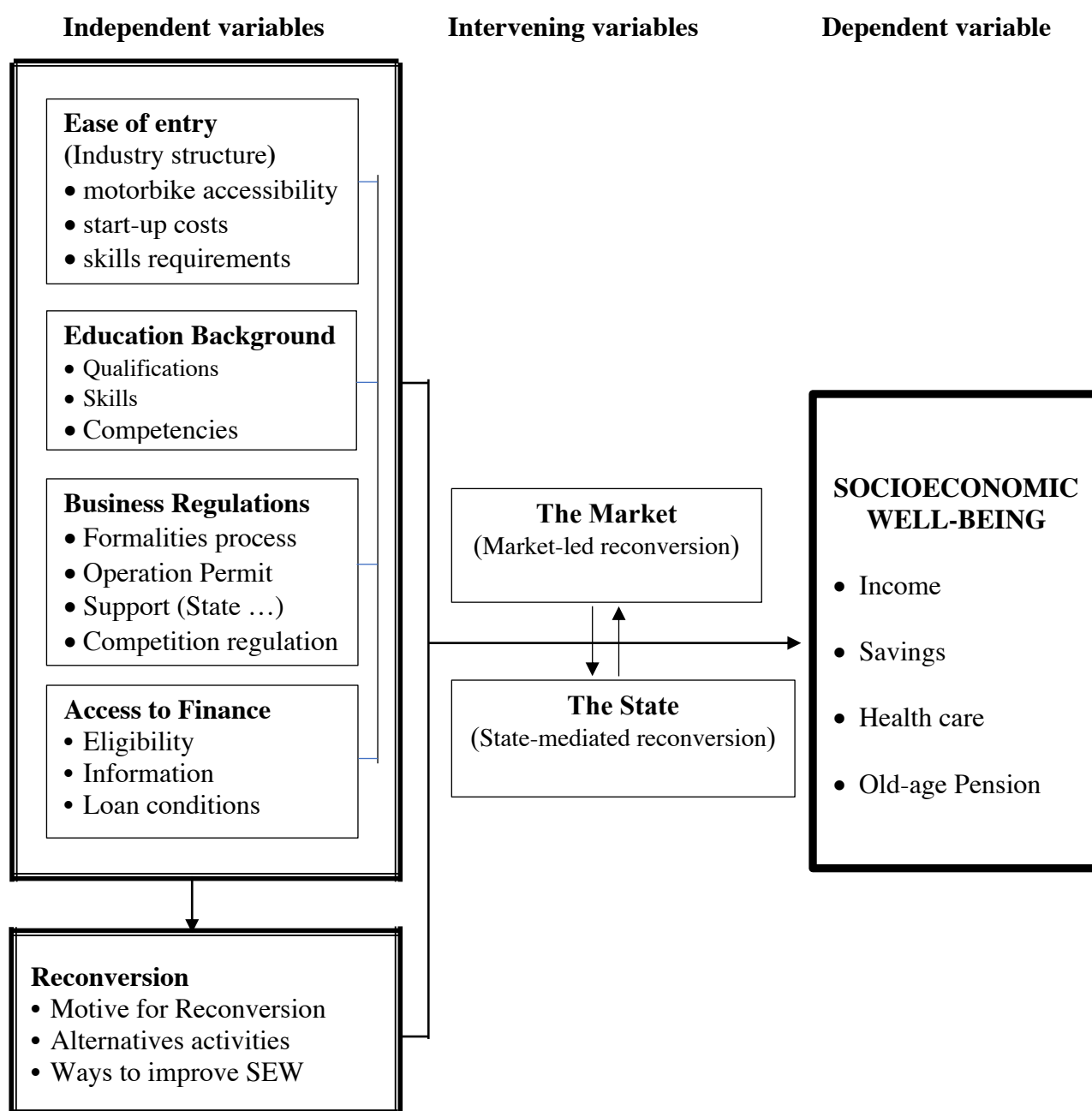
Classical economic theory traditionally postulates that an oversupply of suppliers in a market leads to a reduction in profits. However, the debate on the relationship between corporate profitability and the structural characteristics of the market, combined with other influencing factors, remains open and dynamic. A more contemporary perspective, the theory of contestable markets, challenges this notion, asserting that the potential for competition is sufficiently robust to regulate the behaviour of incumbents by curbing excessive attempts to maximise profits (Baumol, 1982). Despite the theoretical potential for contestability in the transport market, empirical studies of the motorbike transport market are still rare. In particular, Ehebrecht et al (2008) acknowledge this gap, pointing to the lack of formal attempts to test the impact of the structure of the motorbike transport sector on supply-side socio-economic well-being.

Meanwhile, the scale of engagement in Zem economic activity in Cotonou and the deteriorating living conditions of operators point to the existence of social and economic problem that deserves attention. However, little research has examined the socio-economic conditions of Zem service providers in Cotonou, including the possibilities for intra-industry adjustments or inter-sectoral opportunities to improve livelihoods. This lack of concern for their living socioeconomic well-being is notable considering the hundreds of thousands of men and women who depend on Zem for their livelihoods. While previous work in Benin has assessed the organisation of the Zem and documented the associated externalities (Mama et al., 2013; Djossou, 2017; Madougou et al., 2016; Lawin et al., 2018; Zomalhèto et al., 2019), the standard of living of the operators merits closer examination. However, the socio-economic well-being of Zem service providers in Cotonou has received limited attention. Therefore, this study strategically positions itself to fill this critical gap by adopting economic reconversion to approach social transformation within the Zem operators' community in Cotonou.

2.5 Conceptual Framework

This study aimed to establish the relationship between the predictor variables (ease of entry into the Zem industry, Zem operators' level of education, business regulation, and access to finance) and the dependent variable, i.e. the socio-economic well-being of Zem operators. The intervening variables were market-led reconversion and state-led reconversion.

Figure 2.2: Conceptual Framework Model



Objective one analysed the influence of ease of entry into the Zem industry on the socio-economic well-being of Zem operators; objective two examined the influence of the level of education of Zem operators on their socio-economic well-being; objective three examined the influence of business regulation on the socio-economic well-being of Zem operators; Objective four examined the influence of access to finance on the socio-economic well-being of Zem operators, and objective five explores the possible reconversion in the Zem industry to increase the socio-economic well-being of Zem operators.

The objective on the structure of the Zem industry with a particular focus on the entry conditions into the industry, revealed the strengths and weaknesses of the structure of the Zem industry, leading to a suggestion for appropriate reorganisation. The second objective, which focused on the influence of the level of education of Zem operators on their socio-economic well-being aimed to establish how the level of education influenced Zem operators' job management, their ability to diversify their income sources, and their ability to find alternative jobs or alternative economic activities to improve their socio-economic well-being. Designing an appropriate structure for the Zem industry among other strategies, went hand in hand with regulatory policy and access to finance for operators. The structural transformation and regulatory policy carried out with the involvement of the government as an intervening variable is likely to ensure that the new measures have a positive impact on the socio-economic well-being of Zem operators. State intervention must be sufficiently flexible to effectively integrate the functioning of the market. This study envisaged a harmonious functioning of market-led and state-mediated reconversion so that ultimately both the market and the state function based on policy mechanisms. The study aimed to establish the socio-economic well-being of Zem operators as outcome variable measured through a composite score of four variables namely: income, savings, health care, and social protection. The conceptual framework of the study has been summarised and presented in Figure 2.2.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter describes the procedures and methods adopted for the collection of data in this study. It describes the research design, study location, target population, sampling procedure and sample size, data collection instruments, validity and reliability, and data analysis methods.

3.2 Research Design

In the process of identifying the research design to be adopted in this study, it is appropriate to bear in mind that research design depicts the research procedure in terms of the data required, the methods to be applied to collect and analyse these data, and how they will answer the research question (Gray, 2014). In the same vein, Lelissa (2017), stipulated that research design is the procedure for collecting, analysing, interpreting, and reporting data in research studies. As such, the research design provides a roadmap to achieve the study objective. For this study, the research design adopted was consistent with the philosophical position underlying this study on economic reconversion in the Zem industry in Cotonou to improve the socio-economic well-being of Zem operators.

3.2.1 General research orientations

Research design is understood as the process of data collection, data analysis, interpretation, and reporting (Lelissa, 2017). Bradbury-Jones and her co-authors note that researchers today are faced with a bewildering number of research design choices (Bradbury-Jones et al, 2022). However, research is supposed to begin with general guidelines that guide researchers, as Lincoln and Guba state that a paradigm contains the researchers' assumptions about how a study should be conducted. The general research models alluded to are the qualitative and quantitative research models derived from the worldviews of reality, interpretivism and reality positivism, respectively. In fact, historically, to answer the central question of a study, researchers rely on the diktat of research questions or hypotheses to determine which of the qualitative and quantitative methods is more appropriate. Yet, the qualitative design seems to be used more for its ability to generate rich understandings of

phenomena from the experiences of research participants, as it answers the "how" of phenomena. The quantitative study, in contrast, focuses on the measurements and causal relationships between the constructs involved in the study.

Stepping back from the dicta of the research questions and hypotheses, it appears that while meaning-oriented research would a priori call for a qualitative design, the blending of the two can benefit from the best of their respective traditions. Especially a study that fits both designs can benefit the most from blending the two in the same study (Jeanty & Hibel, 2011). But, neither the quantitative nor the qualitative conception is sacrosanct. Besides their respective qualities, they also have limits. This study considered both designs on the assumption that combining them in a mixed-method design will minimise their limitations while accentuating their strengths. Deemed, however, as involving the collection and analysis of both quantitative and qualitative data in a single study where data are collected simultaneously or sequentially (Creswell, 2012), mixed-methods research design continues to evolve, guided by research's fundamentals, that is, the philosophical stance underpinning research.

3.2.2 Philosophical stance underpinning this study

Research is built on sets of concepts and beliefs that identify and dictate what can be studied, how research should be conducted, and how results should be interpreted. All this is based on worldviews in which two paradigms or philosophical postulates are mainly distinguished and govern the world of research: positivism and interpretivism. This study's research design and approach draw on these general research guidelines.

The research hypotheses on how research should be carried out in terms of methodology, approach to reality and truth (ontology), and how to know this reality, i.e. the approach epistemological approach, all of this necessarily influences the methodological choice of the researcher (Jeanty & Hibel, 2011). From an ontological perspective, the objectivist viewpoint considers the existence of social reality to be independent of social actors. This, therefore, assumes any phenomenon or research situation is independent of the researcher's perspective or belief (Lelissa, 2017). In this sense, organisations such as the Zem industry in Cotonou, or any other cultural topic, for example, can be approached in the same way that scientists study physical phenomena. From the epistemological perspective, the positivist research paradigm attempts to solve social problems using scientific laws for generalization to approach social transformation. Since they consider that the world exists externally, its

properties must therefore be measured by objective measurements. They rely primarily on causal relationships and statistical analysis. In this posture, the researcher locates causality between variables and formulates and tests hypotheses in a deductive approach, applying quantitative methods. Here, the observer must be independent of what is being observed.

In contrast, from the ontological perspective, Gray (2014) argues that social reality is constructed through interaction with the world. This view of constructivism rejects the objectivist view and treats social reality as a projection of the human imagination. In this view, the researcher considers that humans can attach meanings to phenomena and shape the world with their perceptions and experiences. Epistemologically, the concern for acceptable and valid knowledge- constructivists adopt what is considered a phenomenological approach, e.i, any attempt to grasp social reality must be based on the experience of people in the reality being studied. In this sense, this school of thought focuses on meanings, trying to understand what is happening, and building theories and models in an inductive approach. Here, the researcher has limited interaction with what he is researching on.

This study has adopted a hybrid approach of conciliating the two extreme views of reality (objectivism and subjectivism) in adopting a pragmatic strategy. Thus, the philosophical position underlying this study is a pragmatic paradigm. Two fundamental considerations explain the reasons for aligning this study with a pragmatic design approach.

First, the lines have since shifted about viewing the two schools of thought as incompatible paradigms, that is, the positivist/empirical approach and the constructivist/phenomenological orientation. Researchers adopt a more moderate stance considering qualitative and quantitative methods somewhat compatible. This paradigm shift has been termed "pragmatism", according to Jeanty and Hibel (2011), who added that pragmatism rejects the "either/or" dichotomy and supports the use of quantitative and quantitative research methods in the same study. In addition, pragmatism considers the research question more important than the method used or the paradigm that underlies the method. The research question predominates the use of the mixed method, quantitative method, or qualitative method. The key is that the research methods can be mixed in such a way as to offer the best possibilities of answering the research question with effective convergence and corroboration of the results, all to serve as an effective method of triangulation.

The second consideration concerns the philosophical position of this study, that is, the philosophical worldview (ontology) that is exemplified in the context of this study. From this

perspective, the study is convinced that the community of Zem exists and that the social reality of operators can be studied through structured means, with human beings, including stakeholders, as social actors to help improve the living and working environment of Zem operators in Cotonou. Economic reconversion in the Zem sector, which consists of studying the influence of industry structure, education, business regulation in Benin, and access to finance on operators' income and SEW, is derived from the existing reality in the social world, with an objectivist orientation. Furthermore, the study considers that Zems and key informants are capable of comprehending and interpreting the causal links between the situation of the Zem market in Cotonou and the socio-economic implications for operators and can thus provide a meaningful explanation and interpretation of the phenomenon.

3.2.3 This Study's Research design

Creswell et al. (2003) identified six different types of mixed-method designs, including sequential exploratory and sequential explanatory. However, Jeanty and Hibel (2011) reported grouping these methods into two main types. On the one hand, there is the simultaneous mixed design where the quantitative approach and the qualitative approach are implemented simultaneously, with the quantitative or qualitative approach dominant, depending on the type of study considered. On the other hand, the sequential design is where one, qualitative or quantitative data, is collected before the other. In this study, a simultaneous mixed research design was adopted.

This research applied the quantitative hypothesis testing approach as central to addressing economic conversion in the Zem industry in Cotonou. However, the quantitative approach was limited in that it did not provide in-depth information on certain aspects of the study, hence some follow-up questions were necessary. In addition, the fifth research objective needed to be addressed through a qualitative approach. Thus, support had to be added through qualitative data from the interview of Zem operators as well as key informants. Ultimately, the research adopted a mixed-methods research approach combining both quantitative and qualitative methods to investigate the factors influencing the SEW of Zem operators in Cotonou and their possible conversion to improve their SEW.

3.3 Location of the Study

Benin has adopted economic liberalism for decades now, yet the country's economy remains relatively poor with an embryonic private sector, a relatively small labour market, and pre-eminence of the informal sector. Indeed, like the economies in sub-Saharan Africa, the Beninese economy is made up of a dualistic structure where the formal and the informal coexist. More dominant, the informal sector includes traditional crafts, street trading, undeclared jobs, micro-enterprises, homework, service provision, transport, smuggling activities, etc. About 9 out of 10 enterprises in Benin (98%) operate in the informal sector, which contributes significantly to the growth of the national economy (65% to GDP growth), and accounts for nearly 98% of employment (AfBD, 2019). Urban areas, of which Cotonou is the lead, concentrate 98.1% of informal economic activity. Informal motorbike transport ranks among these informal activities and, due to its size, contributes to a high concentration of informal activities in Cotonou.

Lying between 6°, 21 latitudes North and 6° 26 longitude East, Cotonou is located on the shoreline stretching between Lake Nokoue and the Atlantic Ocean. The city is cut in two by a lagoon that connects lake Nokoue to the Ocean. Thus, three characteristic points delimit the city of Cotonou: The Lagoon of 85 km² dividing the city in two, Lake Nokoue in the North, and the Gulf of Guinea in the South. This configuration forces the city to extend on a single East-West axis to the former Abomey Calavi suburb in the west and Seme-Kpodji in the East. As a result, urban sprawl on this single axis increases the pressure on urban services and the port of Cotonou, all located in the city centre (Appendix X&XI). The connections between the two parts of the city are provided by three bridges, forming bottlenecks, resulting in high traffic concentration. In this configuration, Zems prove to be the champions of the crossing. As such, large parks of Zems are located at the entrance/exit of the old bridge near the marketplace called Dantokpa, the economic hub of the country and the largest market in West Africa.

In addition, the population growth rate in Cotonou is very high, especially for the municipality of Calavi. Hence a substantial increase in travel between Cotonou, the economic and administrative centre, and Calavi, a relatively residential suburb. This results in an increasingly important traffic jam on the main paved roads where motorbikes are still the champions of fast passage. The lack of an urban transport system gives free rein to the supply of individualised private transport (Zems), the very significant and massive increase of which is creating severe nuisances in terms of accidents, pollution, and noise (SSATP-Benin, 2019).

Although representing a large part of urban jobs, there are still no reliable statistics due to high informality. However, some sources estimated the number of Zems at 200,000 to 300,000 in Cotonou, for a population of about 1,000, 000 inhabitants (Fatchina, 2022). Therefore, the city of Cotonou was well suited as a field for this study on the economic reconversion in the Zem industry.

3.4 Target Population

It is essential to clarify the target population involved in a study to facilitate the contextualisation of the data obtained from the participants (Taylor, Bogdan, & DeVault, 2016). The target population of a study is the large population in which the study is interested, and from which is drawn the sample of respondents (Maxwell, 2012). As such, this study targeted a population made of Zems with more than two hundred operators in estimation, operating in Cotonou, the capital city of the Republic of Benin.

3.5 Sampling technique and sampling size

This section outlines the process of determining the sample size and the process of selecting the Zem operators who will be included in the sample for the survey as the respondents for this study.

3.5.1 Sampling Frame

Due to the lack of up-to-date statistical data, the number of Zems in Cotonou was estimated to be over 200,000 at the time of this research. However, using information from Djossou (2017) and the 2019 transport office (SGP/DSE/DSEF/MCOT, October 2019), it was possible to extrapolate the number of Zems in Cotonou for the period from 2011 to 2020 considered for the sampling frame.

According to Gumel et al. (2017), the activity of Zem is so demanding that the most prolonged experience in this profession lasts, on average, about ten years. Only a small number of operators carry on this economic activity beyond 10, 15, 20 or 30 years. Thus, in the sample size calculation procedure, this study considered a 10-year period (2011-2020) of records held by the Cotonou City Hall and Ministry of Transport statistics offices, to form the sampling frame, i.e., the contactable or accessible population to provide information for this research (Table 3.1).

Table 3.1: Registration of Zems in Cotonou per year

Years	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Influx	14,781	10,867	104,77	15,125	11,140	22,103	4,246	3,549	3,898	3,898	99,882

Source: Adapted from SGP/DSE/DSEF/MCOT - October 2019

The values not available on the register for the years 2019 and 2020 were obtained by extrapolation, the average value of the two previous years having been considered. Thus, to determine the size of the sample, the number of Zem registered in 2019 and 2020 was estimated at 3,898 for each of these two years, resulting in 10 registers considered clusters. The sampling frame is made of a total of 99882 Zem operators for the period from 2011 to 2020. For the results of this study to be reliable, an appropriate sample size must be drawn from this sampling frame.

3.5.2 Sample size

The research sample constitutes the units from which the information for the study was drawn. Although there is no widely recommended formula for determining the study sample size (Mugenda and Mugenda, 2003) suggest that 10% to 20% of the contactable population is adequate to provide information of interest. For this study, 10% of the sampling frame is given by $99,882 \times 0.1 = 9,982$. However, this number seems too high to be easily manipulated for this study. So, the study resorted to Singh and Masuku (2014) who inform that when the reachable population is greater than 10,000, the sample size is given by the formula:

$$: n_0 = Z^2 p q / e^2$$

n_0 = desired sample size where the population is > 10,000. (n_0 is subject to correction and adjustment for finite population size, and size fewer than 10,000)

Z = The standard normal deviation: 1.96 at a 95% level of confidence.

P = estimated population fraction with the desired characteristics, p is estimate at 0.5)

q = 1-p (population that have not the desired characteristic, q = 0.5)

e = the desired level of precision, for this study e is set at 0.05 level

Consequently, the sample size calculated is given by:

$$n_0 = (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2 = 384.16 \sim 384$$

However, since the purposive survey frame for this study is below 10,000, the required sample size n has to be smaller than the calculated $n_0 = 384$. Therefore, n_0 was adjusted to the required sample size (Singh & Masuku, 2014) using the formula of Fisher et al. formula (Owuor, 2017): $n = n_0 / [1 + \{(n_0 - 1) / N\}]$, with n , the desirable size of the sample when the size of the accessible population is below 10,000 n_0 , the desirable size with accessible populations more than 10,000: $n_0 = 384$
 $N = 99,882$

The final estimated sample size, n , using the formula of Fisher et al., is given by:

$$n = 384 / [1 + \{(384 - 1) / 99,882\}] = 384 / 1.004266 = 382.3945 \sim 382$$

Due to circumstances beyond the researcher's control and sometimes unforeseen, not all participants may respond. According to Heo (2014), an expected attrition rate based on the reality on the ground may be considered in the determination of the sample size. The strategy consists in multiplying by a certain factor the calculated number 382 in the absence of attrition. Considering a possibility of 10% attrition, which is 38 respondents (10% of 382 = 38), the final sample size for this study is:

$$n = 382 + 38 = 420$$

Furthermore, fifteen key informants were selected on the principle of saturation. In fact, fifteen to twenty-five key informants are valid for a study, although in general, the number depends on factors such as resources available for the study, data needs, constraints, especially time constraints and other considerations (Key Informants Interview, 2004). Moreover, Muellmann et al. (2020) suggest starting with a reasonable number as up to ten or twelve key informants may be sufficient to provide the necessary information, although it is entirely possible to end up interviewing more informants than initially planned.

On this basis, five members of the board of the Zem union who did not participate in the survey of administrated to active Zem operators, five former Zem operators who have already reconverted to another economic activity, two members of civil society, and three national and local civil servants working in the employment or economic sectors, and who are resource persons on socio-economic issues, including, social protection. This resulted in the selection of fifteen key informants who provided information that could not be provided by the Zem operators surveyed, and which was important for the findings of this study.

Ultimately, 420 Zem operators were interviewed for quantitative data and 15 key informants were interviewed for in-depth qualitative information, making a sample of 435 participants in this research.

3.5.3 Sampling techniques

Overall, simple random sampling and purposive sampling were used to sample study participants. The first technique was used to sample Zem operators, while the second was used to sample key informants (KI).

Concerning Zem operators' random sampling, specific data collection areas have been allocated to data collection agents. For the sake of representativeness, the allocation of data collection areas was designed to cover all 13 districts of the city of Cotonou. The Zem operators to be part of the sample for the survey were then randomly selected, with all the operators having an equal chance of being selected. This technique made it possible to collect data from 420 Zem operators using a digital data collection application designed for this purpose.

The five selected board members of the Zems union were part of the Executive Committee. As such, they were all selected to participate in this study given their position to reveal qualitative information on the factors influencing socio-economic well-being of the Zem operators and the issue of reconversion in the sector. The five former Zem operators were targeted based on their successful reconversion. They were known to the members of the Zem union who gave their names, thus operating as experts. The three local and national officials were deliberately selected as experts on the economy, employment, and social security, and as resource persons in the Zem economic model. As for the two members of the civil society, they were purposely selected for their knowledge of transport economics, and industrial economics, as well as their expertise in socio-economic well-being matters, as academics. These Purposely selected key informants provided additional information for an in-depth explanation of the quantitative results of the data analysis. The information collected helped to emphasise certain aspects by directly quoting key informants' responses.

3.6 Data collection instruments

Primary data collection instruments in this study consisted of a survey questionnaire utilised to collect data from Zem operators and an interview guide to collect additional information from key informants. Secondary data was also collected.

3.6.1 Questionnaire

According to Kothari and Garg (2014), data collection instruments are tools and methods used in data collection. This study administered quantitative and qualitative structured questionnaires to 420 randomly selected Zem operators. The questionnaire was structured with closed and open-ended questions. Qualitative questions were open-ended, and quantitative or open-ended questions were based on the Likert scale. The questionnaire was self-designed according to the specific objectives of the study by the researcher, drawing inspiration from previous studies (Appendix IV). The Likert scale used ranges from 1 to 5 points. The questionnaire was made of 6 main sections (A, B, C, D, E, F).

Section A collected data on the general background information of Zem operators in Cotonou. Sections B, C, D, and E solicited information, respectively, on entry factors into Zem industry, operators' highest level of education, operators' perception of business regulation, and access to finance. Section F collected data on ZOSEW pointing to income (F1), Savings (F2), Health care (F3), and old age Pension (F4). An interview guide was designed to collect information from key informants for in-depth information.

3.6.2 Interview guide

Data was also collected through structured interviews with Zem Unions, former Zem operators, stakeholders, and experts. This instrument consisted of a set of interview questions conducted orally by the researcher himself (Bird, 2016). Interview guides were administered in face-to-face interviews with 15 key informants. The guided questions prepared by the researcher were designed according to the study objectives. It was meant particularly to ask questions and get the information that Zem operations may not be privy to or may not be willing to reveal for fear of victimisation or other reasons. As such the key informant's interview provided additional information that Zem operators surveyed did not come out with during the administration of the questionnaire.

The interview guide for key informants made it possible to collect information from, Zem union officials (Appendix VI) and former Zem operators who have retired or who have opted for reconversion to other economic activities (Appendix VII). The institutional interview guide was used to collect in-depth information from finance officials, Cotonou town hall officials and government officials, all of whom interact directly or indirectly intervene the area of Zem economic activity (Appendix VIII). To complement the information, a specific key informant interview guide was used to collect data from experts in the field of transport, who are economists in the field of Industrial structures' organisation.

3.6.3 Secondary data

Most of the secondary data emanated from the internet, as very little work has been published on retraining or the SEW of Benin's informal motorbike transport service providers. The choice of the documents was based on the selection of keywords, determined based on meaningful words in the topic and objective of the study. Other related words were taken from articles and journals, and other documents were consulted manually. Online dictionaries have also been used, especially the dictionaries Encyclopaedia Universalis and Encyclopaedia Britannica, which present helpful information on "economic reconversion", "well-being", "the socio-economic", "sustainable development", and "social transformation".

The research also consisted of interrogating books in libraries and documents cited by authors read on the subject or to which other authors have referred. This approach was necessary because it allows better knowledge and a better approach to the research subject and to determine the keywords more precisely. Other researchers recommended other unpublished documents and people met during organising surveys and interviews and even during the interviews. The results obtained were pervasive. It was then necessary to make a careful selection to lead to a realistic interpretation of the results by triangulation.

Thus, the primary data was supplemented by secondary data consisting of published and unpublished documents relating to the subject under study and coming from different sources such as journals, reports, magazines, books, thesis, media, encyclopaedia, and internet, information from the public, private, and international organisations.

3.7 Pre-testing / Pilot Testing

Measurement in research must be valid and reliable to ensure robust and reproducible data with higher reflective accuracy (Mohajan, 2018). In this regard, a pre-test was conducted to ensure the precision with which the instrument used measured what it intended to measure and ensure we were hitting the objective. Reliability was also tested through pilot testing to ensure that surveyors respond consistently so that repeating the research with another group of people will yield the same results.

Prior to the main research, a pre-test was conducted to examine any difficulties respondents might have in answering the questions and uncover any pitfalls in the design or administration of the instrument. In the pre-testing process for the instrument's validity, the study relied on the advice of academic experts. Thus, the construct measures were first submitted to the supervisors of this research along with the correction matrix following the examiners' comments at the research proposal defence stage. Once in the field, the instrument was submitted to academic experts in motorbike transport from the University of Lomé, Togo, and the National University of Benin in Calavi (Cotonou). In addition, before the research permit was issued, the questionnaire was thoroughly examined by experts from the Cotonou City Council and the Calavi Commune in charge of managing the Zems sector to ensure, among other considerations including ethics, the validity of the instrument.

3.7 Validity and reliability of the quantitative instrument

3.7.1 Validity

The resolution of some issues raised in the pre-test strengthens the validity and credibility of the instrument. The penultimate item in the regulation measure appeared to be politically sensitive, so it was corrected and placed in a more neutral statement. The pre-test also revealed respondents' discomfort in providing accurate figures on their retirement age and the exact amounts of their income and savings. In this respect, ranges of age, income and savings were proposed to avoid the discomfort raised. The duration of the interview was also improved, thanks to the pre-test. The problem of ambiguity of some questions was solved by training data collectors and research assistants on how to explain or translate the questions.

Respondents also expressed discouragement with such surveys, which ultimately do not change their living conditions. They were encouraged to see research as a way to continue to make their voices heard by decision-makers until a solution is found. Ultimately, content and face validity were ensured so that the instrument could capture the content and meaning of the subject under the study of reconversion in the Zem industry to improve operators SEW.

3.7.2 Reliability

In general, consistency in the form and manner in which questions are asked (their wording, structure, etc) is likely to ensure reliability. However, in addition to the instrument's validity examined through the pre-test, this study adopted the halving method to measure the internal consistency of the test items. This test is likely to indicate the extent to which the test items may be interrelated, as the more interrelated or unidimensional they are, the higher the reliability coefficient. Bhat (2019) points out that reliability indicates the degree to which the test items are error-free.

For the reliability test, this study adopted the Split half-reliability method, which has the advantage of being less time-consuming than the repeated method. The half-reliability method saves the researcher from the difficulty of obtaining the sample group, which is sometimes problematic in the repeated method. This study administered the questionnaire to a sample of fifty (50) randomly selected Zem operators in the commune of Calavi. Then the item tests were divided into two halves based on even and odd numbers, and the correlation between the two sets was performed. SPSS version 26 was adopted for this reliability test, with the results reported in Table 3.2.

Table 3.2: Test of Reliability of the questionnaire

Variables	Number of Items	Spearman-Brown Coefficient
Ease of Entry	5	.836
Educational Background	5	.829
Business Regulations	5	.839
Access to Finance	6	.868

Table 3.1 shows that all the independent variables had Spearman-Brown coefficient of more than .800. Spearman-Brown coefficient of reliability yielded a reliability coefficient of 0.865, which indicates a high reliable coefficient index. Generally, a Spearman-Brown coefficient between 0.7 and 0.8 is unacceptable reliability, between 0.8 and 0.9 is good, and greater than 0.9 is excellent, while 1 is perfect reliability.

3.7.3 Validity and reliability: qualitative instrument

In contrast to quantitative research, where validity and reliability are relatively straightforward, testing the consistency of an instrument in qualitative research, for example, is a real problem. Indeed, it is unlikely to obtain the same answer by interviewing the same person twice, even though the question may be the same. For this reason, reliability and validity in qualitative research are mainly discussed in terms of trustworthiness. Polit and Beck (2014) argued that in qualitative research, validity refers to the issue of trustworthiness.

The validity of the qualitative instrument in this research was enhanced by selecting the participants purposively, with the criterion that they are familiar with the research topics and can provide relevant opinions on the subject. Member checking was agreed upon and considered to allow respondents to clarify their intentions, correct their errors and provide additional information to the data. To ensure triangulation, many data collection methods and data sources are used to enrich the research findings and make them more robust and intelligible. Various secondary data based on previous research in the Zem industry in Cotonou, which were helpful for generalisation, ensured the validity of the research by helping to moderate the low impact of a single research source. The study ensures reliability and transferability by collecting a reasonable amount of data to make the results generalisable to the whole population of Zem operators in Cotonou. As for generalising these results to other situations and contexts, this study proves that they are somewhat likely and not absolute.

In addition, this study provides a reasonably good description of the research procedure and the instrument used, making it possible to conduct a new study on participants with similar demographics, ask questions and code the data as in this study, and obtain similar results. In this regard, an audit trail was considered. Although the interviewees requested anonymity and refused to be recorded, the notes taken during the interviews are available for verification. The interview guides used to collect data from key informants are incorporated in the appendix

section of this study. Efforts to reduce errors and biases by checking the accuracy of the data provided by the participants before closing the interview and confirming them after the final transcription contributed to the reliability and validity of this study.

3.8 Data Collection Procedures

The research took place over three months, from March to May 2021, in the context of pre-and post-election social tensions in the country. Thus, the political atmosphere and the second wave of the coronavirus pandemic forced adjustments to the data collection process planned as part of this research.

3.8.1 Familiarisation with the study environment

Familiarisation with the study area helped me prepare for the fieldwork. During this field test, the researcher faced the waiver of most operators when asked to sign their consent to participate in this study. Likewise, they refused their consent to recording the interview, even systematically conditioning their participation on anonymity and the presentation of a research permit issued by the Central Town Hall of Cotonou or the Town Hall of the Commune of Calavi. This extreme mistrust could be explained by the tense political atmosphere in the run-up to the presidential election, with unrest and arrests. Familiarisation with the study area also made it possible to see the number of research assistants needed, identify key informants, and prepare the pre-test of the study. As part of this familiarisation, the researcher administered five questionnaires to test for the requirements of this research, hence the need for 5 Research Assistants (RAs).

3.8.2 Selection and Training of Research Assistants and Data Collection Agents

Research assistants (RAs) were selected for their previous research experience and their ability to speak fluently, in addition to French, the main local languages spoken in Cotonou, namely "Fon" and "Yoruba". The RAs were Master's students and 2 PhD students. The principal researcher trained them with the help of a senior researcher in the field (an academic). The training covered the subject of the study, familiarisation with the questionnaire, the best possible translation into local languages, presentation of the study to the respondents, et cetera. After their training, each RA administered five questionnaires.

Following rumours of possible social tensions in the run-up to the presidential elections, the team met to discuss this political atmosphere and its possible impact on the research process. Three relevant ideas emerged: designing a digital application for data collection, recruiting five additional data collectors based on their experience in data collection and their ability to speak 'Fon' and/or 'Yoruba'. The recruited DCOs were university-level and could also benefit from this research academically. The suggestion to work in pairs (one RA and one DCO) was adopted. The aim was to collect a reasonable amount of data with relatively few errors before any social tensions prevented the research from proceeding. In addition to reducing errors, the pairing strategy was also intended to reduce the length of the interviews and allow for mutual assistance in explaining questions to respondents when necessary. Everything was designed to be ethical, preserving the right to vote and the safety of the data collectors. Adapted from the Android application "KoBoCollect", the data collection application for this study was designed and tested by the RAs.

As for the training for data collection agents, the RAs gave the training with the assistance of the main researcher. It was about knowing how to use the digital application, translate the questionnaire into local languages and correctly note the information from the open questions. The research team agreed to reach out to respondents when they are alone, driving around searching for a client, or at their point of rest. When approaching respondents at pickup points, data collectors made sure to isolate the respondent before conducting the survey to avoid the influence of others. The instruction to avoid disrupting the economic activity of both users and operators of Zem was respected as much as possible. Thus, a Zem with a client who is unavailable was not surveyed. The training lasted one day, and the data collection agents, all students, were used to this type of exercise. As part of the training, each duo (RA & DCA) administered two face-to-face interview questionnaires using the digital application. This made it a total of 50 Zem operators surveyed, providing the data needed for the study's pre-test and pilot test.

3.8.3 Constraints of Covid-19 Pandemic

DCs committed themselves to wearing a mask and inviting respondents to do likewise before, during, and after the survey, in compliance with the Covid-19 barrier measures. This was part of the contribution of this research in terms of transformative actions towards Zem operators' minds and behaviours. Actually, it was the contribution of the study vis-à-vis the

management of Covid-19 to which they were exposed and exposed their passengers due to the incompatibility of social distance with motorbike transport. DCs received a few masks for operators with dirty masks and disinfectants. They also agreed to carry a bag containing the necessary equipment for the data collection operation: paper copies of the questionnaire, sanitisers, masks, drinking water, phones, and a power bank for phones.

3.8.4 Survey Procedure

The collectors worked in pairs with the RA administering the questionnaires and completing the digital application throughout the data collection. His assistant, also completing the digital application, was explicitly responsible for recording respondents' responses to follow-up questions (open-ended questions). Throughout the data collection campaign, there was also the possibility to interchange the roles. At the end of each interview, they confirmed the answers to the open questions by rereading them to the interviewee.

For the sake of representativeness, the DCs pairs had been distributed harmoniously to cover all communities in Cotonou, the area of the study. The geo-location reports made it possible to follow live their movements inside and outside their assigned areas. Thus, the principal researcher carried out the coordination and monitoring of the progress thanks to geo-location while he also organised the meetings for the stage of the interviews with the key informants. The possibility of double sampling was avoided as respondents were not remunerated. Indeed, they would not afford to waste their time participating many times in the administration of the same questionnaire. This seems enough to avoid repetition with the same respondent.

3.8.5 Key Informants' Interviews

In parallel with the surveys, the researcher also started the interviews with key informants according to the timeframe and the availability of any of the key informants. Interviews with key informants lasted until May 11, 2021. Two key informants who missed the appointment they gave the PR were replaced. However, they voluntarily insisted on giving their opinion on the matter. These latest talks took place in June 2021 through socio-media connecting Cotonou, Benin's economic capital, to Nairobi, the capital of Kenya. Public and private officers received the researcher in their office, while former Zems and Zem Union officials joined each based on an agreed venue and time.

3.9 Data Analysis

The data analysis in this study consisted, apart from pre-processing the data, reviewing, reorganizing, and adjusting to derive meaningful information for valid and reliable conclusions on the subject of the study (Chapman, 2018), namely the influence of the ease of entry into the Zem industry, education, business regulation and access to credit, on the improvement of well-being socio-economic operators, and their possible economic reconversion.

3.9.1 Data Pre-processing

Pre-processing was necessary to make data analysable and interpretable. Consequently, after data collection, data pre-processing consisted of checking and examining the questionnaires again for inconsistencies and cleaning for omissions and errors in the field survey to ensure the study's accuracy, reliability, and relevance. In addition, data pre-processing also included the coding of all the variables considered in the framework of this study. This whole process, although tedious given the number of respondents and the number of variables, was intended to form a solid basis for the processing and analysis, quantitatively and qualitatively, of the data collected. The analysis generated descriptive statistics to describe the characteristics of the sample and categorize the variables by summarizing the trends arising from the responses of the ZOs surveyed. Charts, frequency distribution tables, percentages, and measures of central tendency, were used to visualize and summarize the large amounts of data in this study, thereby making them more malleable.

3.9.2 Quantitative Data Analysis

The quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) version 27 to generate descriptive statistics (frequencies, percentages, mean, mode, and standard deviation). Multiple regression analysis was used to determine the relationship between predictor variables (Ease of entry, Government regulations, Education level, and access to finance) and outcome variable (Socio-economic well-being). Assuming that the response Y to the explanatory variables were linear in the parameters and that the errors were independent and identically distributed, the regression model capturing the hypothesized relationship was given as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon, \text{ where}$$

Y = Zem operators' socio-economic well-being

X_1 = Zem operators ease of entry into the Zem industry

X_2 = Zem operators' educational background

X_3 = Government business Regulation

X_4 = Access to finance

β_0 = Constant

$\beta_1, \beta_2, \beta_3, \text{ and } \beta_4$ = Coefficients of X_1, X_2, X_3 and X_4 respectively

ε = Error term

To apply the hypothesized sample model ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$) accurately to the population, multiple regression assumptions were tested. The finding from the analysis was presented in form of charts, pie charts, figures, graphs, tables, and narrations.

3.9.3 Qualitative Data Analysis

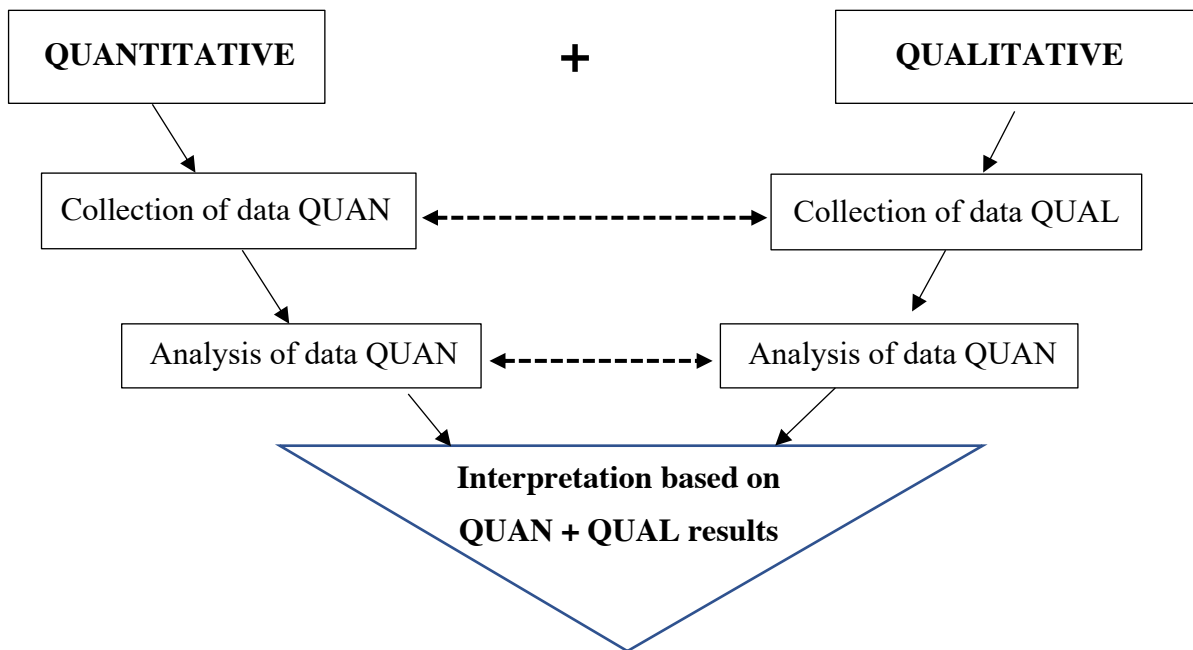
The data from the open-ended questions and key informant interviews were subjected to qualitative analysis. This involved examining the data, coding, and indexing for accuracy and completeness. The data was also transformed into numerical values using content analysis. This reprocessed data was then subjected to thematic and content analysis according to the objective of the study to make sense of it. These were presented in narrative and direct quotation form. In this way, the quotes from the voice of the respondents were used to corroborate and add depth to the quantitative information, with the aim of highlighting the importance of the information obtained from the operators surveyed. Essentially, the fifth objective of the study was analyzed solely on the basis of qualitative data analysis.

3.9.3 Mixed Approach Data Analysis

The methodological triangulation used in this study was the concurrent triangulation design of the mixed-method approach. The study adopted this methodological approach to cross-validate the results and provide a deeper understanding of the reconversion in the Zem industry to improve ZOSEW. The data were collected simultaneously, although the analysis of each data set was done independently. However, salience analysis of the data was used to assess co-occurrences for codes such as motives behind willingness to reconvert, alternative economic activities envisaged for reconversion etc.

Codes with high salience promote understanding and help guide the strategy to address occupational insecurity in the Zem industry. Finally, the quantitative and qualitative data interpretation has been integrated, as shown in figure 3.2.

Figure 3.1: Concurrent triangulation design



Source: Creswell (2009)

3.10 Operationalization of Constructs

Factors influencing economic reconversion in the motorbike industry have been operationalized through 4 variables: Ease of entry, education, business regulation, Access to finance, and the level of SEW. A 5-point Likert scale for each item was used for the measurements. However, some ordinal scales with three, four, or five categories have been introduced. In fact, at some points, the need for dichotomous (yes/no) responses or dummy variables arose. They were accordingly included in the questionnaire.

Independent Variables

Ease of Entry

The ease of entry into the Zem industry means the level of difficulty that an individual faces to enter the Zem industry or market in Cotonou, which affects the intensity of competition, and the profitability of the business as new operators enter, supply increases and prices lower, in theory, concerning the Zem transport market, an individual will decide whether to penetrate the industry based on arbitration on expected benefits and the costs of entry into the Zem industry. These costs of entry relate to the access to a motorbike (whether by purchase, lease, or entrusted by a friend or a relative), registration process fees, the cost of the permit to operate, etc. Based on these costs, a Zem operator, in theory, determines whether the entry is affordable or not. The literature informs that several methods were used to measure entry. Still, they associated entry with barriers in the sense that a barrier to entry was considered anything that restricts entry. However, the measurement of the height of the barrier remains more or less equivocal due to the still unsolved problem of the common definition of the barrier.

Hence, this study builds on Heger and Kraft (2008), who used a subjective method based on the fundamentals of economic theory that profits attract new entrants into an industry. In this regard, this study investigated the effect of entry on profitability from the perception of Zem operators. Although the subjective method is pointed out for its limited reliability, it is quite useful in this current study. Zems surveyed might change their opinions later; still, the study considers that no one is better than Zem operators at assessing the characteristics of the industry in which they operate. Moreover, individual evaluation serves as the basis of their decisions. To investigate the ease of entry, five items related to entry into the Zem industry were proposed to the respondent to collect their opinions using a 5-point Likert scale ranging from 1- Strongly Disagree to 5- Strongly agree.

Educational background

The educational background of Zem operators in this study is understood as the cognitive and somewhat practical skills that Zem operators have acquired. These cognitive skills were supposed to equip them with the ability to identify, for example, unmet needs in the

market, such as goods delivery services. These skills are also expected to enable them with good judgment in the exercise of their trade, including the ability to manage their income well or assess the state of affairs in the Zem market and predict the economic trend in the market. The ability to find alternative sources of income is part of the indicators of these cognitive and practical skills surveyed among Zem operators.

The variable educational background of Zem operators is calculated using the average value given to each of the five items designed to measure the educational background of Zem operators in this study. To collect the Zem operator's subjective opinions on each statement, the measurement consisted of five items on a five-point Likert scale ranging from 1- strongly disagree to 5- strongly agree.

Business Regulation

In general, two broad traditions govern the economic theory of regulation, i.e., public and private interest theories of regulation. Various regulation definitions focus on economic regulations governing market decisions, social regulations protecting the public interest, and administrative regulations monitoring individual economic decisions (Higton, Archer & Vorley, 2019). Economic and social regulations inspire this study. Economic regulation mainly applies to market structures with imperfect or excessive competition (for example, restrictions on entry or exit), ensuring price controls and minimum quality standards. Social regulations, on the other hand, cover the environment, health and safety, consumers' protection for equal opportunities, the subordination of the supply of certain goods and services to the possession of a permit, and others. Researchers examine and evaluate the various definitions, trying to make the construct amenable to more practical analysis and measurement. But the body of literature in economics still suffers from the lack of a fixed definition (Hertog, 2010).

Nevertheless, a definition of the regulation is still necessary for delimitation, contextualisation, and operationalisation of the construct. This study, anchored in social transformation for SEW, goes beyond the generic terms to approach regulation. Thus, regulation was considered to mean the use of government instruments to implement socio-economic policy objectives, which can promote the improvement of ZOSEW. Six items were proposed for the measurement, and a 5-point Likert scale was used, ranging from 1- Strongly disagree to 5- Strongly agree.

Access to Finance

In this study, operators' access to financing was defined as the provision of financial services at affordable costs. Access to finance in this study refers to the extent to which operators do not face price constraints for using financial services (Bae *et al.*, 2012) Otherwise, they are considered not to have access to financing. Access to credit is not easy to observe, hence it was measured by considering the situation where operators were involuntarily excluded from the financial services, either because of their unaffordability or for reasons of discrimination.

Relying on Dermirguc-Kunt and Peria (2008), who estimated access to finance based on obstacles to financial services such as physical access, affordability and eligibility, this study uses the eligibility of the operators and the affordability of the service to estimate operators' access to finance, through 5 items For each item, operators were asked to rank their opinions on a 5-point Likert scale with anchors ranging from 1- "very difficult" to 5- very easy Access to finance was calculated using the mean values allotted for each of the five items measured using a 5-point Likert scale.

Economic Reconversion among Zem Operators

The economic conversion of Zem operators refers to the economic reconversion of the post-war period when the need to find jobs for those employed by the war became evident. However, economic reconversion in the Zem industry, specifically the reconversion of Zem operators, is much more open. It refers to the process of transition, disruption, and occupational reorientation in the context of the exhaustion of the Zem economic model, which no longer seems to be viable since it can no longer secure the socio-economic living conditions of the operators. Yet the objective of this study was to understand the logic at work in the reconversion of Zem operators in Cotonou. To do this, open-ended questions and semi-structured interviews were used. Zem operators were asked to express themselves on how they envisioned their future in the face of the challenges of finding another job or engaging in other income-generating activities in order to improve their socioeconomic well-being.

Dependent Variable: Socioeconomic Well-being

In this study, SEW is understood as the quality of life in reference to the social and economic factors that contribute to the quality of life of Zem operators in Cotonou. Various factors are involved in individuals' overall quality of life: income, education, employment, safety, security, social support, and others. In the context of the SEW of the Zems, this study selected income as one of the indicators for its capacity to influence the choices of Zem operators in terms of food, health care, children's education, housing, family support and participation in funerals. In this study, three other indicators were selected, and the number was limited to four, namely, income, savings, health care, and the old-age pension. Income and savings were measured by asking operators how much they earned per month and how much they saved per month. In addition, 5-point Likert scale measures were introduced to find out to what extent their income and savings levels contributed to the improvement of their living conditions. Healthcare and old-age pensions were measured by asking operators to indicate the extent to which they agreed with statements about these indicators of healthcare and old-age pensions. However, in measuring SEW, at some levels, the need for dichotomous responses (yes/no) occurred and was also incorporated into the questionnaire. The level of SEW was measured by computing the composite score of the contribution of the four indicators together (income, savings, health care and old-age pension) to SEW.

Intervening variables: Market and State induced reconversion

The market in this study refers to exchange systems between Zem transport users and providers. As they agree on the trip prices, thereby influencing operators' income. In theory, this system is enough to influence the decision of operators to quit Zem activity or to continue depending on their satisfaction. Hence, the term market-induced reconversion was adopted in this study. The decision to quit does not necessarily happen as the Zem industry witnesses an increasing number of operators. This study predicts the entry into play of external forces represented by the state through its policymakers into the business environment in Benin. These external forces are referred to as state-mediated reconversion. The Benin government is committed to promoting not leaving any citizen behind. Incidentally, the state is an avoidable component of the market. Therefore, the market and the state are understood as intervening variables, which interact fluidly without the state impeding the laws of the market but acting for the social well-being of Zem's operators. Market- and state-induced conversion has not been

measured due to the difficulty of measuring them and also to the theoretical analysis and analytical implication. Treuren (2015) argued that control variables are used as a research habit instead of considering the implications.

3.11 Ethical Considerations

Due to political unrest in the research environment, participants were unwilling to give written consent. However, the study guaranteed anonymity, confidentiality, privacy and respect for participants' rights. In the questionnaires, participants were identified by numbers rather than names in order to protect their identity. Key informants were informed of their right to answer all or part of the questions or to withdraw from the study at any time. Identities were protected before, during and after the research. Some participants requested letters of approval, which were provided. Letters of approval were issued by Cotonou Central Council and Calavi City Council on the basis of approval from Tangaza University College in Nairobi, Kenya. The research assistants and data collection assistants each received a copy of the three letters of approval. The study caused the least possible disruption to communities by avoiding interviewing participants at peak times or during passenger transport. Economic activities were therefore not disrupted. Covid-19 protocols such as social distancing, wearing masks and disinfecting hands were respected. Thanks to these measures, the research respected the participants' consent, privacy, economic livelihood and health during the study.

3.12 Chapter Summary

This chapter has presented the research design for this study on economic reconversion in the motorcycle taxi industry for the improvement of operators SEW in Cotonou, Benin. The study adopted a mixed-method survey design where a semi-structured questionnaire was administered to 420 motorbike taxi operators for three weeks. Furthermore, 15 key informants were interviewed based on key informant interview guides made of open-ended questions. This chapter has also explained the procedures used for data collection and data analysis. In addition, it described how the reliability and validity of the research instruments were ensured.

CHAPTER FOUR: PRESENTATION OF THE RESULTS

4.1 Introduction

This chapter presents the results and analysis of the data collected in this study. The study aims to improve the socio-economic well-being of Zem operators in Cotonou. Therefore, the study examined the conditions of entry into the industry, the level of education of people operating in the Zem industry, the business environment regulation, and access to finance as factors that may influence the socio-economic well-being of operators. Further, the study examined a possible reconversion in the Zem industry to boost the socio-economic well-being of Zem operators in Cotonou, Benin. To this end the study was guided by the following objectives: To establish the influence of ease of entry into the Zem industry in Cotonou on operators' SEW; To examine the influence of the educational background of Zem operators in Cotonou on their SEW; To determine the influence of government business regulations on the operators' SEW in Cotonou; To establish the influence of access to credit among Zem operators in Cotonou on their SEW, and to explore how Zem operators can reconvert to boost their income and well-being.

4.2. Characteristics of the sample

Given that Zem operators vary in different aspects (age, education, marital status, etc.), it was essential to describe the sample that provided the information for this study. The reason for this is to give an insight into the functioning of the Zem industry under consideration in this research. Thus, the Zem operators surveyed in this study were almost exclusively male (419 or 99.78%), with the presence of only one woman in the sample. The average age of the sample was 35 years, the youngest being 17 and the oldest 67. The level of education ranged from primary school to university level. Seniority in the job ranged from a few months to 30 years. More than half of the surveyed operators (221 or 56%) grew up in rural areas, while the remaining 174 or 44% grew up in urban areas. Daily income in the sector averages between US\$4 and US\$5 for more than 10 work hours, the minimum being about US\$2 and the maximum about US\$8. The average number of dependents per operator is 6, the minimum being zero and the maximum 16. Reasons for engaging in this occupation vary though two main reasons prevail: the lack of alternative employment opportunities, and the relative ease of entry into the Zem transport industry, due to the relatively easy start-up.

Concerning their perception of their job as a Zem, 134 operators, i.e., 33.9% of the respondents considered the Zem as a permanent job, while 158 (40%) took it as a temporary job hoping for a more stable employment opportunity till they end up established. Others have seen Zem as a supplement to their salary or as a hobby, and therefore often operate illegally. Asked whether they would consider engaging in other alternative economic activities to Zem, a large majority of 334 people, representing 84.6% of the operators interviewed, expressed their willingness to switch, citing the lack of alternative employment opportunities as the reason why they still operate in the Zem sector. The intention to change job was motivated by a variety of factors, including declining income and occupational insecurity. It should also be noted that some of the operators surveyed carry out other activities in parallel with the exploitation of the Zem, while others carry out only the Zem.

4.3 Response Rate

The study collected data from 420 Zem operators. In the end, 395 responses were deemed complete and satisfactory, giving a response rate of 94.0%. This was an excellent rate according to Creswell (2017) who consider a response rate of 70% or more to be sufficient for analysis.

4.4 Reliability of scales used in the study

Adopting the half-reliability method, this study tested the reliability of the instrument, using data from the questionnaire administered to a randomly selected 50 Zem operators. The SPSS version 26 used to perform the test generated Spearman-Brown coefficients for ease of access, level of education, regulation, and access to finance of .836, .829, .839, and .868, respectively, as shown in Table 3.2 (page 73). In general, a Spearman-Brown coefficient between .8 and .9 is good, and above .9 is excellent, while 1 corresponds to perfect reliability. Below .8 is unacceptable reliability. For this study, the Spearman-Brown reliability coefficient yielded an overall reliability coefficient of 0.865, indicating a high reliability coefficient index.

4.5 Distribution of the Characteristics

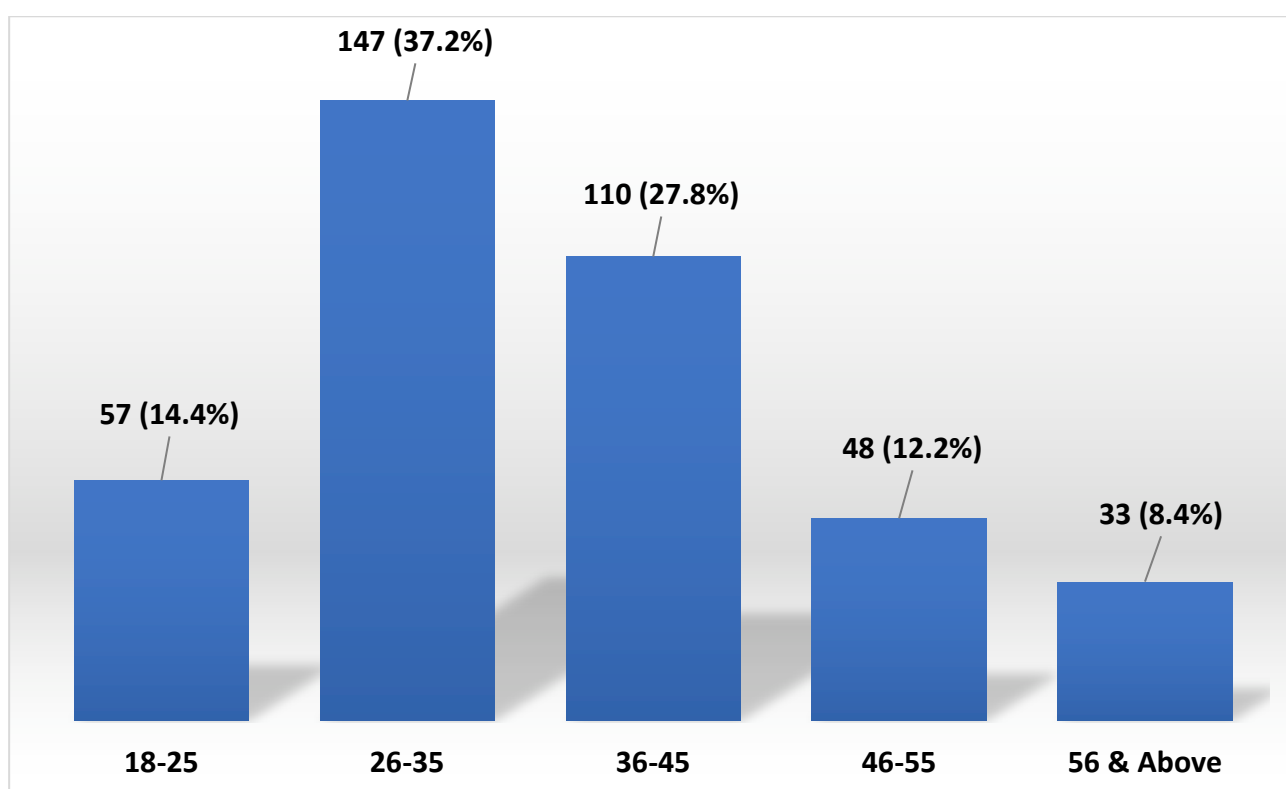
4.5.1 Gender Distribution

The gender distribution of the Zem operators sampled for this study in Cotonou is as follows: Out of 420 respondents, only one respondent was a woman, i.e. 0.25%. Thus, the Zem industry is dominated by men.

4.5.2 Age of Respondents

The study established the age of respondents. The information of the age brackets of the respondents was found to be important since it was a particular age group that considered motorcycle business as a formal employment as well as portraying whether Zem operators are able to exit when they get older possibly through reconversion or just retirement. Figure 4.1 shows the respondents' age distribution.

Figure 4.1: Respondents' Age Distribution

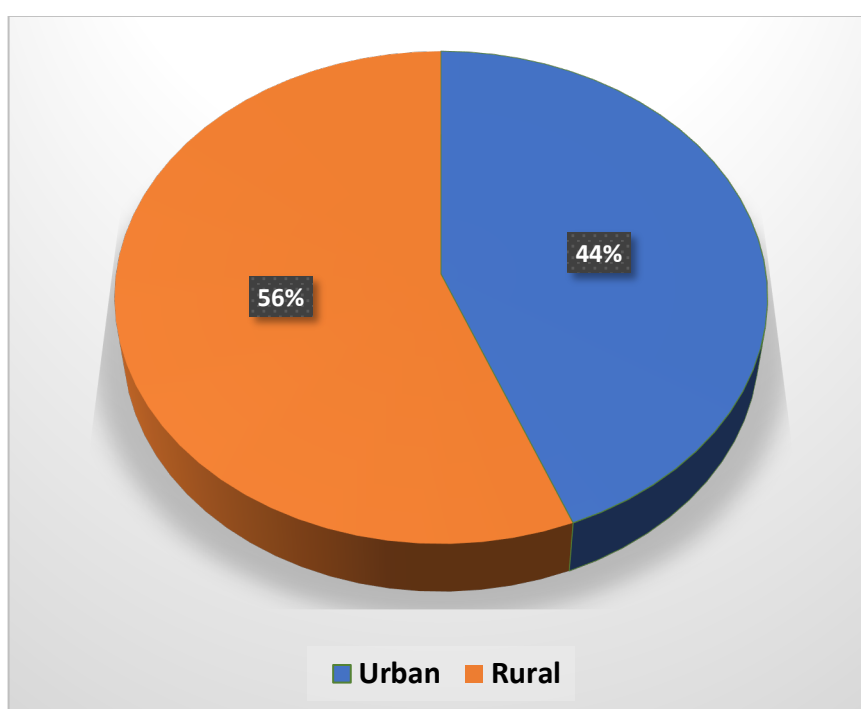


Adopting an operational definition of youth as people between 18 and 35 years, figure 4.1 above shows that over half of Zem operators (51.6%) were youth. This was followed by middle-aged operators (36-45 years) who constituted 27.8 %. This implied that the motorbike industry in Cotonou was dominated by young to middle-aged operators. Nonetheless, a substantial number of operators in the age bracket of 46 and above were also in the motorbike business. The continued presence of older members in the Zem industry casts doubt on viable retirement programmes as well as on reconversion opportunities.

4.5.3 Locality in which the respondents grew up

The study also sought to determine the locality in which the Zem operators grew up. This was important because most people who grew up in rural areas in Benin seem to be more accustomed to agricultural activities. Thus, Zem operators who grew up in rural areas could presumably more easily reconvert to agriculture when other activities like Zem became unviable. Figure 4.2 shows that most operators surveyed, 221 representing 56% of respondents, were previously rural residents or at least had grown up in rural areas before moving to the Megacity of Cotonou for the Zem occupation. This implied that the income from the motorcycle industry came in handy as the operators tried to adjust and settle in Cotonou. Therefore, a decline in daily income could push some of them to two options, either to adopt a very low standard of living in the city or to reconvert to other occupations including rural income-generating agricultural or non-agricultural activities.

Figure 4.2: Area where Zem operators Grew Up

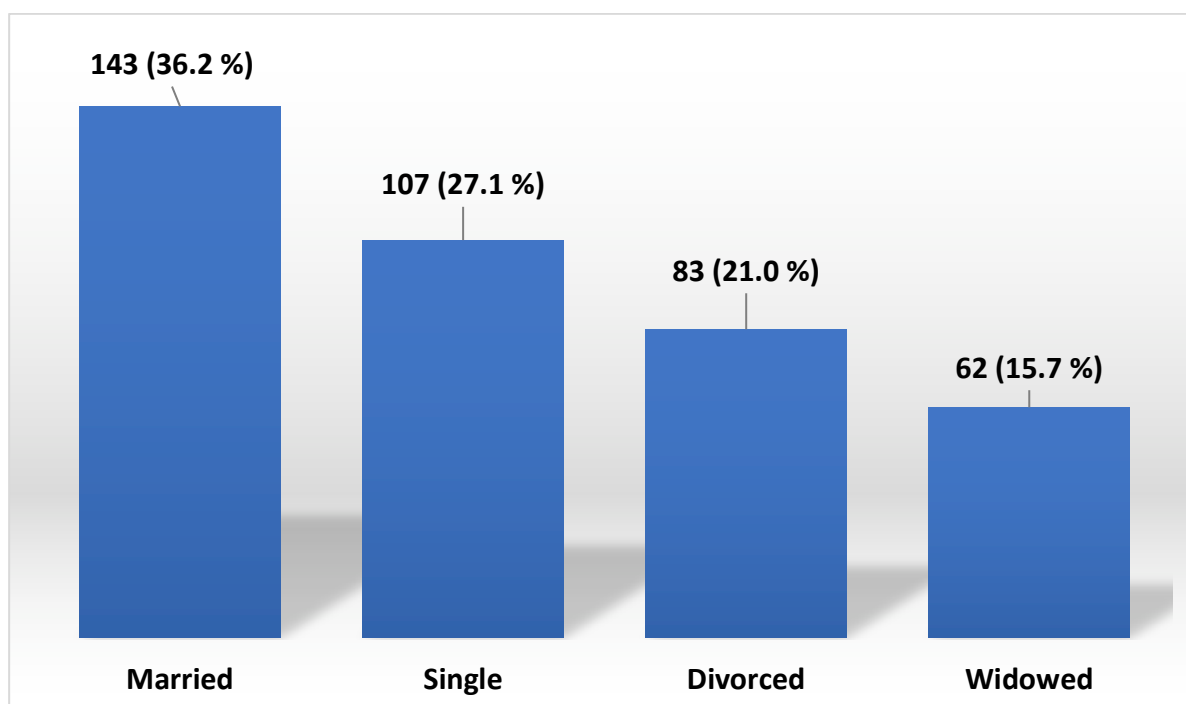


The environment in which one grew up and the economic activities practiced there appear to be decisive in the decision to move away from the precariousness and life uncertainty to which these Zem operators were exposed; hence the decisive role of life experience, including the characteristics of the locality in which they grew up, in the reconversion process.

4.5.4 Marital Status

The study embarked on establishing the respondents' marital status. Figure 4.3 shows that the largest percentage (36.2%) of Zem operators were married. This implies that they had family responsibilities. Similarly, the divorced and widowed who constitute a considerable percentage (36.7 %), were most likely to be shouldering even a greater family burden as they struggled as the sole bread earners. Many Zem operators were still single constituting 27.1 %. The single-status operators were mostly young school leavers attracted to the motorcycle transport business as they look forward to starting their families. However, some of the interviewed operators disclosed that they had a great burden of supporting their siblings and ageing parents.

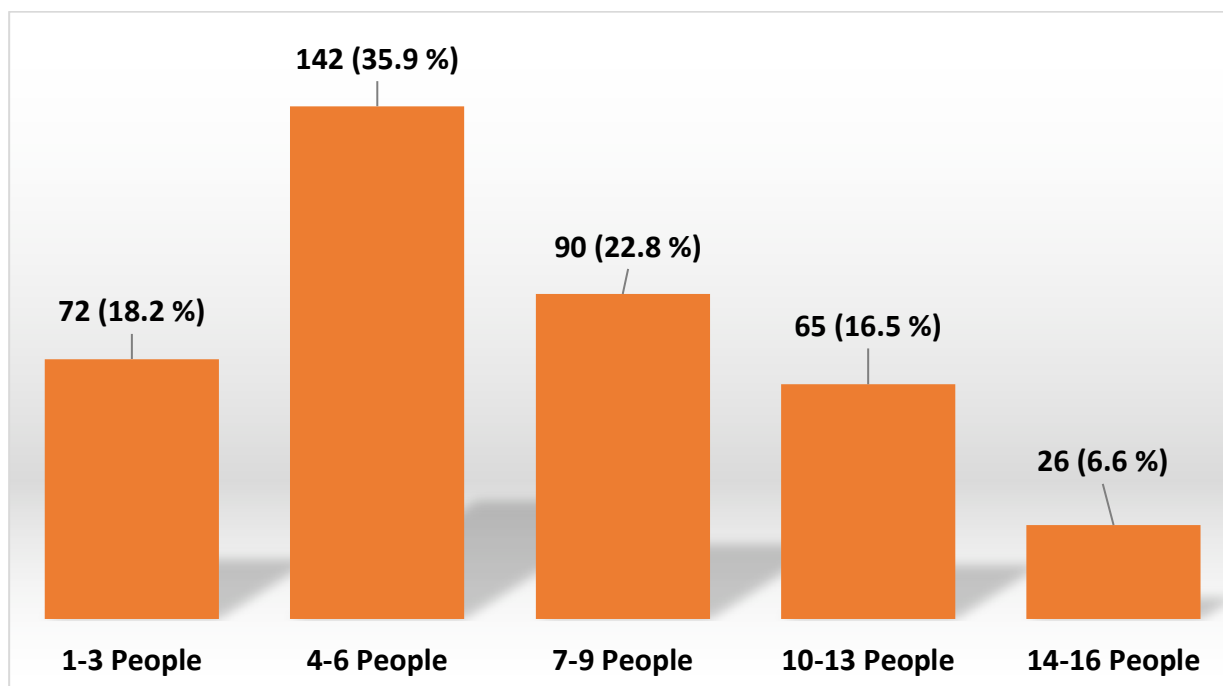
Figure 4.3: Respondents' Marital Status



4.5.6 Household Size

In order to establish the household size, respondents were requested to state the number of people that were under their support including themselves. Figure 4.4 below shows their responses. As evident from Figure 4.4 a large section of respondents, constituting 35.9 %, had a household of four to six people. Such families were typical of the Zem operators at the age bracket of 26 to 35 years, married and taking care of their parents.

Figure 4.4: Number of People in the Household



There was also a large number of operators, constituting 39.3 %, who were taking care of seven to thirteen people. This implies that they were conforming to the mostly African tradition of taking care of the extended family. It was also worth noting that some Zem operators constituting 6.6 % were shouldering the burden of very large families of 14 to 16 people. Thus, any negative variation in the motorbike transport business had far-reaching ramifications for the entire fraternity of Zem operators.

4.5.7 Working Experience

The study sought to establish the Zem operators working experience. Working experience could have a bearing on daily earnings as one knows how to manoeuvre through traffic challenges, friction with law enforcement officers, and pricing technicalities. Additionally, operators with more experience could provide more relevant and valid information on socio-economic well-being and their perception towards reconversion.

Figure 4.5: Zem Operators Working Experience

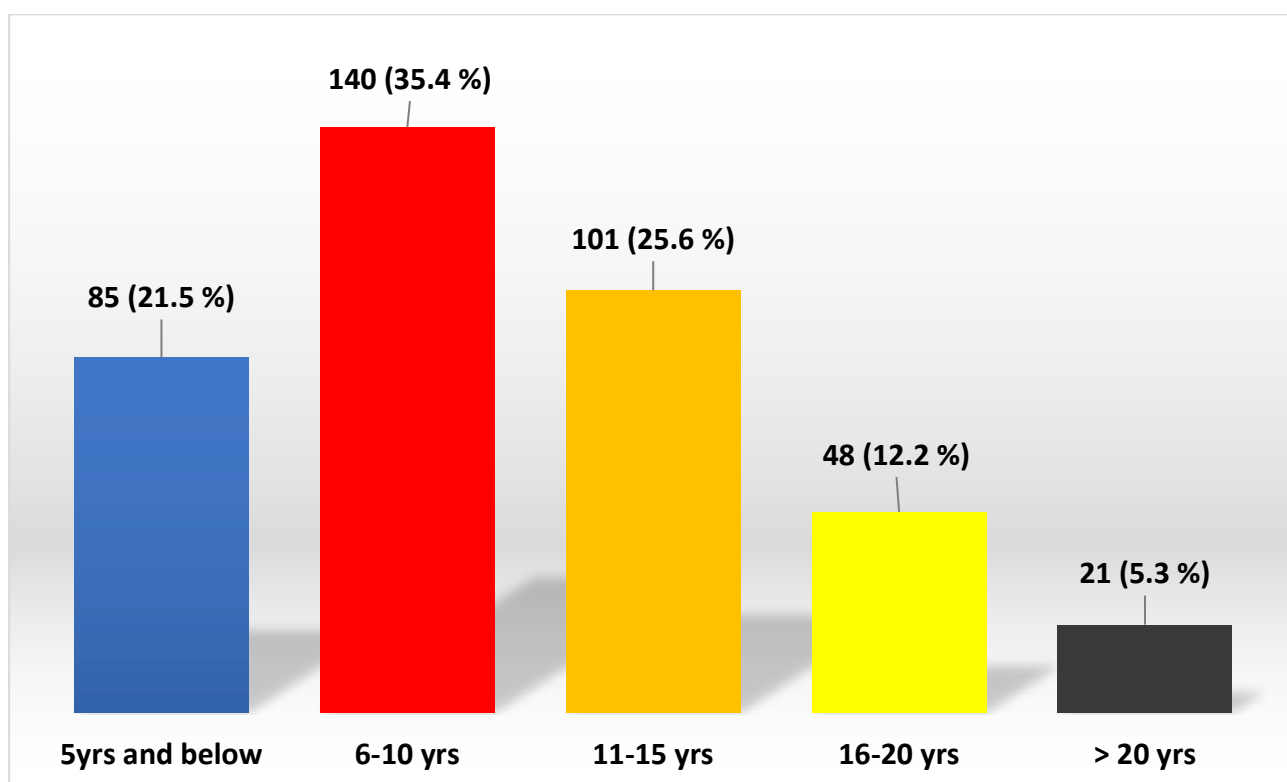


Figure 4.5 shows that the majority (61.0 %) of Zem operators were well experienced having worked for six to 15 years. Further, 17.5 % of respondents had at least 16 years and above in the motorbike transport business while less than a quarter were relatively new entrants having worked for up to five years. These figures show that most Zem operators have been in this profession for quite a long time in Cotonou and are therefore capable of providing relevant information on their SEW as well about the process of reconversion aimed at improving their socio-economic situation.

It was noteworthy that there were many veterans who had worked for 11 years and beyond constituting 43.1 % suggesting that despite the numerous challenges they might have encountered, they were not able to reconvert to other economic activities.

4.5.8 Professional Qualification

The reviewed literature shows that in Africa, the motorcycle transport business sub-sector has been attracting people from varied educational and professional backgrounds. The operators' differentials in professional qualification backgrounds would translate to their levels

of financial management, public relations, assessment of business growth and generally their socio-economic well-being.

In that regard, the researcher searched for professional qualifications or occupations of Zem operators before their engagement in the Zem business. Table 4.1 shows the various professions or occupations where the respondents came from.

Table 4.1: Professional Qualifications of Zem Operators

Profession	Frequency	Percent
Civil Servant	20	5.1
Employee	19	4.8
Craftsman	75	19.0
Unemployed Graduate	51	12.9
Student	31	7.8
Apprentice	36	9.1
Agriculture	102	25.8
No Qualification	41	10.4
Others	20	5.1
Total	395	100.0

As shown in Table 4.1 the highest number of Zem operators were from the agricultural sector (25.8 %), followed by craftsman (19.0 %), unemployed graduate (12.9 %), no qualification (10.4 %), apprentice (9.1 %) and student (7.8 %) in that order. This shows that the motorbike sector attracted not only jobless people but also those in employment elsewhere.

4.5.9 Respondents' Perception of Zem Business

The researcher further wanted to find out how the Zem operators perceived their business. The perception was important because it could influence the likelihood of the operator reconverting or continuing in the same business to old age.

Table 4.2 shows that 158 Zem operators representing 40.0 % considered the Zem operation as temporary employment while looking for a stable job while 134 or 33.9 % took it as a permanent job. Other 87 respondents constituting 22 % perceived the Zem as a supplementary side hassle.

Table 4.2: Representation of Zem Business

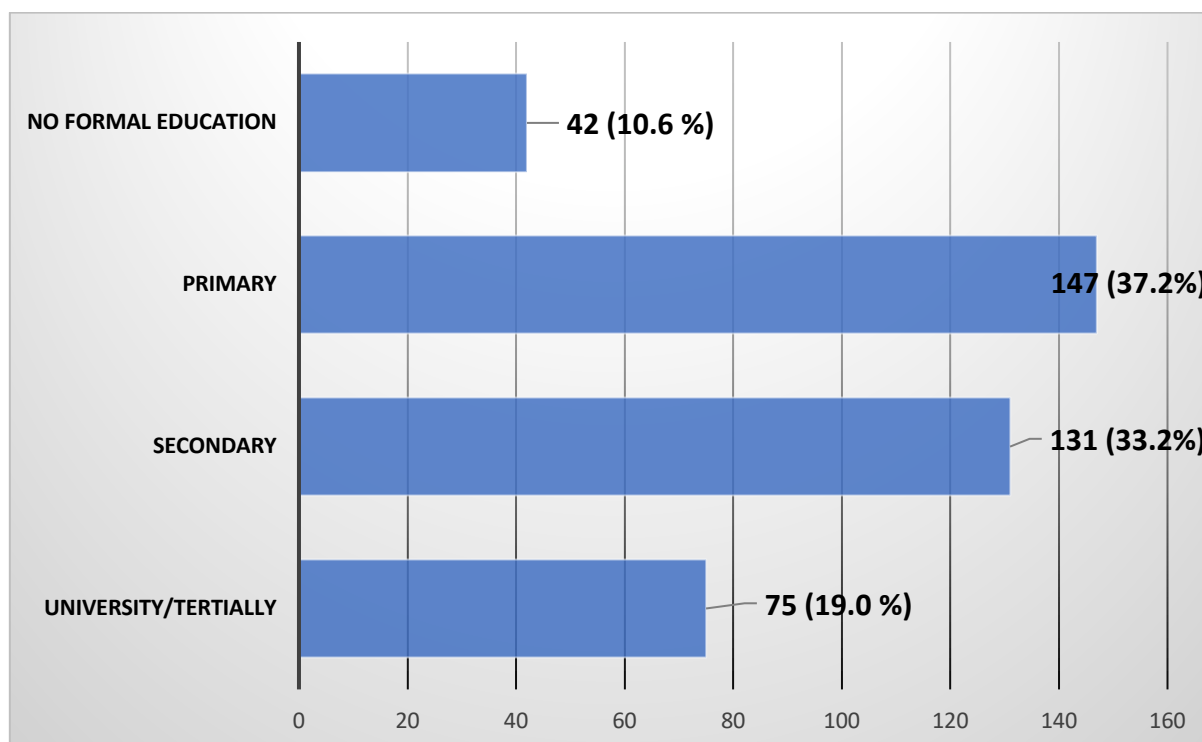
What Zem activity represents	Frequency	Percent
Permanent job from which I live and make my life	134	33.9
Temporary employment while looking for a stable job	158	40.0
Supplement for salary or other sources of income	87	22.0
Other	16	4.1
Total	395	100.0

The varied perceptions reflect the different goals of people as they enter into the sector from different professional backgrounds. The high number of Zem operators (261 or 66.1%) who do not consider the business as a permanent job, could jeopardize their sense of saving and commitment. On the other hand, a lack of permanency in their outlook may hasten their decision to reconvert into a more stable, predictable, and profitable alternative.

4.5.10 Respondents' Level of Education

The study also sought to establish the respondents' level of education. As evident from Figure 4.6 a large section of Zem operators constituting 37.2 %, had received up to primary school education followed by 33.2 % who had secondary education. Also notable is the presence of 19.0 % of operators who had received a university or college education. Only 10.6 % of the operators indicated that they had not undergone any formal education.

Figure 4.6: Level of Education Among Zem Operators



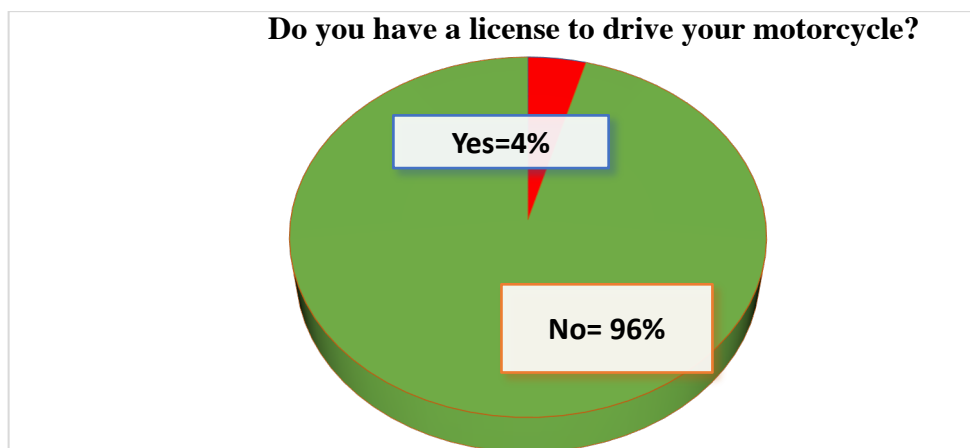
Thus, the motorbike transport business sector attracted people from all levels of education. This begs the question: does the level of education influence the way Zem operators conduct their business leading to disparate levels of socio-economic well-being? And would the more learned operators have leverage in reconverting to more lucrative businesses?

4.5.11 License Holder

In most transport businesses, the driver's competency is paramount to ensure the safety of all road users. This condition is ascertained by the issuance of the license. The absence of a license may result in heavy penalties more so in the event of an accident. It may also escalate daily expenses as the Zem operator bribes the way through the law enforcement officers. Figure 4.7 captures the respondents' responses.

It is noticeable from Figure 4.7 that only 4.0% of respondents held a riding permit. This implies that most operators were unwilling to comply with the licensing requirement. It could also mean that the sector is self-regulating, thereby incentivizing its members as much as possible to obtain a license as a compliance measure.

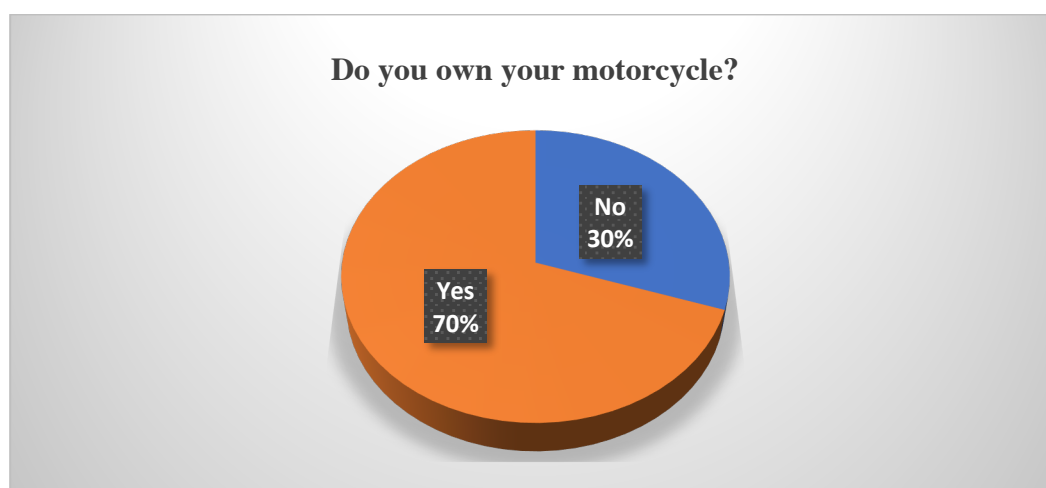
Figure 4.7: Possession of Zem operating Licence



4.5.12 Motorbike Ownership

The reviewed literature showed that the motorbike transport business is characterized by operators who ride their own and others employed. The two categories of operators may end with different profit margins and varied levels of socio-economic well-being. Thus, the research embarked on establishing the scenario among the Zem operators in Cotonou. Figure 4.7 shows the respondents' responses.

Figure 4.8: Motorcycle Ownership



As shown in Figure 4.8, the majority of Zem operators (70.0 %) in Cotonou operated their own motorbikes and this implied that they had no external pressure on the income they got. However, as high as 30.0 % of respondents were mostly hired riders in which the income is shared as per the agreement with the owner.

4.6 Willingness to Reconversion

The study was also interested to know whether, given an opportunity, the Zem operators were willing to reconvert to other more viable economic activities. The answers to the question *"If you were given the opportunity will you quit Zem to consider alternative income generating activity?"* are shown in Table 4.3.

Table 4.3: Willingness to Reconvert among Zem Operators

		Frequency	Per cent	Valid Percent	Cumulative Percent
Valid	No	61	15.4	15.4	15.4
	Yes	334	84.6	84.6	100.0
	Total	395	100.0	100.0	

Table 4.3 shows that the majority, 334 Zem operators, representing 84.6 percent of respondents, were willing to abandon Zem economic activity. Given the magnitude of the willingness for reconversion, it is likely that the instant cash provided by the activity was the main driving force. Thus, another opportunity to access better living conditions could motivate them to abandon, or at least reduce, their practice of Zem. It is therefore desirable to facilitate access to alternative employment for those who wish to abandon the Zem business, and to restructure the industry for better returns for those who wish to continue operating in the sector.

4.7 Zem Operators' Socio-Economic Well-being

The study's dependent variable was captured as the respondents' socioeconomic well-being (SEW). The reviewed theoretical and empirical literature was instrumental in how the construct socio-economic well-being was defined in this study. Thus, the construct SEW was defined in terms of several sub-constructs namely, the respondents' income level, savings, health care, and pension. The researcher tried to measure SEW both quantitatively and qualitatively. To measure the SEW quantitative

ly, a set of statements in form of five points Likert scale was presented to the respondents. For each of the items, frequencies, percentages, mean and standard deviation were generated.

Income from Zem Economic Activity

- How much do you estimate your average monthly earnings?

Table 4.4: Average monthly earnings of the Zem Operators

Rating	Earnings in FCFA*	Earnings in USD(\$)	Frequency	Percent
1	< 25000	< 37.82	169	42.8
2	25001-50000	37.823-75.64	112	28.4
3	50001-75000	75.644-113.46	60	15.2
4	75001-100000	113.47-151.3	43	10.9
5	>100000	> 151.3	11	2.8
	Total		395	Mean = 2.03, SD = 1.13

NB: * FCFA: Franc of "Communauté Financière Africaine" (African Financial Community)

* Currency rate: 1\$ = 661 Fcfa... As at 22-08-2022

Table 4.4 shows that a large number of the Zem operators constituting 42.8 % earn less than 2500 per month while 28.4 % earn between CFA 25,000 and 50,000 (\$38 - \$76). This implies that the majority of Zem operators (71.2 %) earn very little that could hardly support them and their dependents. However, 15.2 % of the Zem operators indicated that they earn between 50,001 to 75,000 (\$76 - \$113) while 10.9 % had a monthly income of between 75001 and 100,000 (\$113 - \$151). Surprisingly, there were a few (2.8 %) Zem operators who earned as high as more than 100,000 (\$151) per month. The general sentiments of the respondents were represented as follows:

I'm just passionate about this job and that is why I'm happy with the little I earn per day. I pray so that others may leave, and the profit can then improve. Otherwise, the earnings are very little, and it is a real challenge. (Respondent 49)

The sentiments show that earnings from the Zem business are low but while some are planning to exit, some are there to stay having no plausible alternative.

- How easy is it for you to make ends meet with your daily or monthly income?

Table 4.5 Making ends meet with earnings from Zem Activity

	Response	Frequency	Percent
1	Very difficult	54	13.9
2	Difficult	186	47.1
3	Neutral	0	0.0
4	Easy	122	30.9
5	Very easy	33	8.4
	Total	395	Mean = 2.7, SD = 1.3

As evident from Table 4.5, the question of how easily Zem operators made their ends meet in consideration of what they earned daily, or monthly income elicited varied reactions.

A large section of respondents (47.0 %) found it difficult while 13.9 % found it very difficult to make ends meet. Conversely, 30.9 % found it easy while 8.4 % found it very easy to make ends meet using what they earned. One of the respondents wrote:

To be frank, this business is nowadays very difficult and frustrating...apart from the morning and evening hours, we spend most of the day waiting desperately for customers. We are so many of us at my designated waiting bay or stage such that to get a customer you have to alert all the time. Don't forget that we have freelance Zems who roam along the roads beckoning the same customers. To make the ends meet, it is often very difficult. (Respondent 32).

- **Level of satisfaction with the Income from the Zem activity in recent years**

1-Very decreasing (VD) 2-Decreasing (D) 3-Same (S) 4-Increasing (I) 5-Very increasing (VI)

Table 4.6: Level of satisfaction with the income from Zem activity in recent years

Statement		1	2	3	4	5	Mean	S.D
The number of daily trips in my Zem activity is ...	f	88	174	44	52	37	2.5	1.0
	%	22.3	44.1	11.1	13.2	9.4		
The number of my regular customers is ...	f	85	133	78	67	32	2.6	1.1
	%	21.5	33.7	19.7	17.0	8.1		
The average price of the trip over the last two years is ...	f	20	33	212	97	33	3.2	1.0
	%	5.1	8.4	53.7	24.6	8.4		
The income from my Zem activity is ...	f	109	136	65	60	25	2.4	0.9
	%	27.6	34.4	16.4	15.2	6.3		

N = 395

Table 4.6 shows that for most of the Zem operators (66.4 %) the number of daily trips made was decreasing while 11.1 % found no change and only 22.6 % experienced an increasing number of trips. This implies that the competition for customers was becoming stiffer translating to decreasing income. Over half of Zem operators (55.2 %) indicated that the number of regular customers was on a downward trend. Further, 53.7 % of respondents indicated that the average price of the trip over the last two years remained the same while 33.0 % indicated that the price was increasing. Thus, a combination of decreasing number of trips and stagnant price per trip amid escalating operational overheads was indeed a blow to most of the Zem operators' revenue base. A majority of Zem operators (62.0 %) indicated that the income from their Zem activities was decreasing, 16.4 % indicated there was no change and 21.5 % experienced a rising trend.

This shows that although they were conducting their business in the same town, there occurred income differentials. The level of business satisfaction was best captured from one of the Zem operators' comments:

I am tired of working overtime and coming home late at night, I would like to have a daytime working mode just to be with my family, and also be able to go to the stadium with my friends to occasionally watch the matches of the squirrels -the national soccer team of Benin. (Respondent 34)

Savings

- How easy or difficult is it to save money from your business income?

Table 4.7: Savings from the Zem Activity

	Response	Frequency	Percent
1	Very difficult	43	10.9
2	Difficult	185	46.8
3	Neutral	70	17.7
4	Easy	67	17.0
5	Very easy	30	7.6
	Total	395	Mean = 2.6, SD = 1.1

Table 4.7 shows that majority of Zem operators (57.7 %) found it difficult to save while 24.6 % of them found it easy. This implies that most of the Zem operators were 'hand to mouth' businesspersons. Also, in a case of sickness or any kind of incapacitation would mean an economic disaster to the affected person. One of the respondents lamented:

Profit in the sector (Zem sector) is finished to the point that saving money is no longer an option. Now the government has decided to impose health insurance for all from next year. It won't be free, it's an extra expense that's coming. It's already a worry for me because my children's school fees increase every year as they move up in the school ladder. (Respondent 171)

- Has the amount of your savings increased or decreased over time?

Table 4.8 Evolution of the Savings from the Zem activity over time

	Response	Frequency	Percent
1	Highly decreased	90	22.8
2	Moderately decreased	151	38.2
3	Neutral	39	9.9
4	Moderately increased	70	17.1
5	Highly increased	45	11.4
	Total	395	Mean = 2.6, SD = 1.1

As evident from Table 4.8, 22.8 % of Zem operators considered the amount of their savings to have highly decreased over time while 38.2 % regarded the income to have moderately decreased. On the other hand, 17.7% of Zem operators found the income to have increased moderately while only 11.4 % indicated that the income had highly increased over time. Thus, the majority of Zem operators were not enthusiastic about the motorbike transport business industry growth trend.

Though most of my customers understand the need to pay more due to the increased price of fuel, they are not ready for an increase in the price of transport, complaining about the cost of living. So, I end up charging the same amount, thus making practically no savings. (Respondent 320).

Health Care

- **Zem Operators' exposure to health risks**

Zems are always at risk of suffering injuries or death from an accident, suffering from respiratory disease due to pollution and exposure to vagaries of weather, back pain and others.

Table 4.9 Zem Operators' exposure to health risks

	Response	Frequency	Percent
1	Strongly agree	229	58.0
2	Agree	75	19.0
3	Neutral	14	3.5
4	Disagree	61	15.4
5	Strongly Disagree	16	4.1
	Total	395	Mean = 1.9, SD = 1.1

Concerning health matters, Table 4.9 shows that 77.0 % of Zem operators agreed that they are exposed to respiratory diseases, and air pollution and that most have back pain arising from sitting on the motorbike for long periods. Such poor health conditions impacted negatively on their socio-economic well-being. A key informant observed:

Apart from the recurrent accidents in Cotonou in which the Zems are often involved with injured and dead among them, air pollution in Cotonou is also a silent killer. And all this poses a real public health problem for our fellow citizens.... we are not saying that the Zems are the only ones responsible for the air pollution in Cotonou, but their plethoric number contributes greatly to it. In addition, they pay the heaviest price for this pollution because they are the most exposed to it. Studies indicate that the rate of respiratory disease is higher among them. (Key informant – 11).

- **Health care coverage**

Table 4.10: Coverage of Health Costs by Income from Zem Activity

	Response	Frequency	Percent
1	Very difficult	78	19.7
2	Difficult	159	40.3
3	Neutral	82	20.8
4	Easy	18	4.6
5	Very easy	58	14.7
	Total	395	Mean = 2.5, SD = 1.0

As evident from Table 4.10, 60.0 % of Zem operators indicated that over time, covering their health costs with income from their business proceeds was becoming difficult. However, 19.3 % of the Zem operators found it easy regarding the affordability of their health bills. One of the respondents commented:

When I joined this business 15 years ago, I could cater to all the health bills comfortably. I saw no need for insurance... nowadays the earnings have gone down. I went down with acute pneumonia, and the doctor advised me to go slow on the motorcycle commercial transport business and if possible, stop it. The bill was so high that I had to fundraise. I felt ashamed but had not otherwise. (Respondent 162).

Old Age Pension

Table 4.11 shows that majority of Zem operators (77.0%) were not confident of a secure retirement. This implied that most of the Zem operators were not able to invest in long-term benefits and livelihood from their business earnings.

Table 4.11: Income from the Zem business and retirement security

	Response	Frequency	Percent
1	Strongly agree	229	58.0
2	Agree	75	19.0
3	Neutral	14	3.5
4	Disagree	61	15.4
5	Strongly Disagree	16	4.1
	Total	395	Mean = 1.9, SD = 1.2

The following comments exemplify the different shades of Zems outlook on their old age life:

The way things are going, I am not sure of having any substantial investment by the time I call it quits in this business. My vision is already failing me and the dressing feels too heavy for me. I am a trained tailor and clothes designer and once I get an opening, I will say bye to this back-breaking work. (Respondent 58)

I do not have any other training apart from this one, I hope to remain with humble earnings until when riding the motorcycle will become practically impossible. I think being active also helps me to remain relatively healthy and young.
(Respondent 182)

Social Standing of the Zem Operators

Generally, how would you rate the social standing of the Zems operators in your community?

Table 4.12: Perceived Social Standing of the Zem Operators

	Response	Frequency	Percent
1	Despised	38	9.6
2	Looked down upon	188	47.6
3	Not sure	109	27.6
4	Respected	42	10.6
5	Highly respected	18	4.6
	Total	395	Mean = 2.5, SD = 1.0

As shown in Table 4.12, a large number of respondents (47.6%) felt that they are looked down upon by the members of their community while 9.6 % believed that they are despised. Such a feeling can lead to low self-esteem and other psychosocial problems. A considerable number of Zem operators constituting 27.6 % were however not sure while only 15.2 % felt that they were respected. One of the respondents said:

My children are not necessarily proud of the jobs that feed them, because of the social label attributed to Zem activity in Benin and particularly in Cotonou. (Respondent 213)

Similarly, as this other respondent pointed out, society as a whole in Cotonou has a negative and exclusionary perception of Zem operators:

When I go to the National University where I studied, and because of my work clothes, I am no longer welcome in this environment which frustrates me a lot. (Respondent 308)

Overall, the response of Zem operators regarding their socio-economic well-being had a mean of 2.5 and a standard deviation of 1.1. This implies that, on average, the socio-economic well-being of the Zem operators in Cotonou, is low.

4.8. Easy of entry in the Zem industry and operators' socio-economic well-being

The first objective of the study was to analyse the influence of entry conditions into the Zem industry in Cotonou on operators' socio-economic well-being. To accomplish the objective, a set of statements in form of five points Likert scale was posed to the respondents to indicate the extent to which they agreed or disagreed with them. The responses were coded such that strongly disagree (SD) was rated number 1 while strongly agree (SA) was rated number 5. Further, the mean responses were computed such that: a mean response of above 3.0 was considered as agree while a mean of below 3.0 was considered as disagree. For ease of reporting the SA and A percentages will be reported together as well as SD and D. Table 4.13 shows the proportion of respondents, mean responses, and standard deviations.

Table 4.13: Ease of Entry into Zem Business and Socio-Economic Well-being

Statement		SD	D	N	A	SA	Mean	S.D
Affordable access to motorbikes by purchase, lease, or entrusted, makes entry easy.	f	34	29	35	117	180	3.96	0.8
	%	8.6	7.3	8.9	29.6	45.6		
The affordability of registration formalities for Zem business operations makes entry into the industry easy	f	31	60	54	165	85	3.54	1.21
	%	7.8	15.2	13.7	41.8	21.5		
Zem operators and investors find it easy and costless to exit from Zem industry	f	51	60	2	163	119	3.61	1.39
	%	12.4	15.2	0.5	41.3	30.1		
The continual number of new entrants in the Zem industry is very high	f	33	53	48	174	87	3.58	1.21
	%	8.4	13.4	12.2	44.1	22.0		
It is easy for new operators to enter and compete in Zem industry	f	63	146	33	107	46	2.82	1.31
	%	15.9	37.0	8.4	27.1	11.6		
Grand Mean & Standard deviation							3.5	1.2

n = 395

Table 4.13 shows that an overwhelming majority (75.2 %) of Zems agreed that the affordable access to motorbike, whether by purchase, lease, or entrusted by a friend or relative, makes the entry into the Zem industry easy. This implies that access to the trade of Zem is somewhat relatively within the reach of people from different backgrounds and professions. For instance, some students were able to use the school fees to acquire a motorbike, join the business and recover the spent school fees. However, despite the relatively low cost, there was a number of operators depended on hired motorbikes as shown in figure 4.13. The majority of Zem operators (63.3 %) agreed that the affordability of registration formalities for Zem business

operation makes entry into the industry easy while 23.0 % disagreed. This implies that the government of Benin requirements for registration were not stringent. However, the lack of stringent measures was blamed for the rising cases of nasty accidents caused by careless driving and flagrant flaunt of rights of other road users. This was best captured by one of the key informants who commented:

For the Zem industry, government requirements are very minimal, and, in most cases, the operators just do without adhering to what is expected of them. The law enforcers are keener on the vehicle's inspection. Some of the operators learn how to ride as they do business and thus endanger the lives of passengers, other road users and theirs. (Key informant – 4)

Most of the Zem operators (71.4 %) agreed that Zem operators and investors find it easy and costless to exit from the Zem industry. This is yet another factor that enables people from different professions to enter the motorbike transport industry in Cotonou. The sector attracts some of the ongoing students, school leavers, civil servants and employees who have been declared redundant, unemployed graduates and others. Some try and stick while many others exit each year due to the challenges associated with the business. According to some of the operators and key informants, the operators who exit either sell their motorbikes or employ others to do the work for them.

The fact that the start and exit, seem somehow seamless, makes the venture to some extent, attractive to many. It was then no wonder that most of the Zem operators (66.1 %) agreed that the continual number of new entrants in the Zem industry was very high ($M = 3.58$, $SD = 1.21$). However, despite the affirmation that there are many new entrants new year, over half of the respondents (52.9 %) indicated that it was not easy for new operators to enter and compete in the Zem industry, due cartel system, as the Zem unions own the parks. Thus, a Zem cannot use a park without first paying the membership fee, although the new entrants could pay as they conduct the business.

The easy entry must be put into perspective, as competing with the already established Zems who are members of the Zem unions is not just given. These difficulties are linked to a kind of cartel system, as the Zem unions own the parks. Thus, a Zem cannot use a park without first paying the membership fee. (Key informant – 6)

Overall, Zem operators agreed that their business has ease of entry (Grand Mean = 3.5, $SD = 1.2$) and thus increasing competition. This implies that the earnings from the business might be reducing and thus affecting socioeconomic well-being.

4.9 Educational Level of Zem Operators and their Socio-Economic Well-being

The second objective of the study examined the influence of the educational level of Zem operators in Cotonou on their socio-economic well-being. To accomplish the objective, a set of statements in form of five points Likert scale were posed to the respondents to indicate the extent to which they agreed or disagreed with them. The responses were coded such that strongly disagree (SD) was rated number 1 while strongly agree (SA) was rated number 5. Further, the mean responses were computed such that: a mean response of above 3.0 was considered as agree while a mean of below 3.0 was considered as disagreed. Table 4.16 shows the proportion of respondents, mean responses, and standard deviations.

Table 4.14: Educational Background and Socio-Economic Well-being

Statement		SD	D	N	A	SA	Mean	S.D
My academic education has helped me in conducting Zem business in terms of interpersonal skills	f	77	90	66	91	71	3.00	1.40
	%	19.5	22.8	16.7	23.0	18.0		
My business skill has helped me better identify unmet needs in the market	f	70	137	62	80	46	2.73	1.29
	%	17.7	34.7	15.7	20.3	11.6		
My managerial skill has helped me better manage my income	f	68	118	87	69	53	2.80	1.29
	%	17.2	29.9	22.0	17.5	13.4		
My academic education has enabled me to diversify my source of income	f	75	132	73	67	48	2.7	1.29
	%	19.0	33.4	18.5	17.0	11.9		
My academic education has enabled me to keep abreast with what is happening or predicted in the Zem business sector	f	84	122	58	74	59	2.75	1.37
	%	21.3	30.9	14.2	18.7	14.9		
Grand Mean							2.8	1.3

n = 395

In reference to Table 4.14, the statement that ‘My academic education has helped me in conducting Zem business in terms of interpersonal skills’ elicited varied opinions from the respondents. While 41.0 % of Zem operators agreed with the statement, 42.3 % disagreed and 16.7 % were undecided. The response to the statement had the relatively highest standard deviation demonstrating the extent of the variation in opinion ($M = 3.0$, $SD = 1.40$).

This implied that many operators were not certain of how education was contributing to the conduct of their business. Furthermore, the motorbike business had attracted people from diverse educational and professional backgrounds. Slightly over half of Zem operators (52.4

%) disagreed that their business skills helped them to identify unmet needs in the market, 31.9 % agreed while 15.7 % were uncertain.

Thus, while operators felt that the business education had improved their business conduct, the other half did not associate how they conducted their business-to-business education. Similarly, the response regarding the benefit from managerial education to better manage their income was varied. While 30.9 % of Zem operators affirmed, 47.1 % disagreed and as high as 22.0 % were undecided. Over half of Zem operators (52.4 %) disagreed that their academic education has enabled them to diversify their source of income while 28.9% agreed and 18.5 % were neutral.

Similarly, the statement that ‘My academic education has enabled me to keep abreast with what is happening or predicted in the Zem business sector’ was refuted by 52.2 % while 33.6 % of Zem operators agreed. In general, the response of Zem operators on education shows that about half of them appreciated that education played a key role in their business conduct while the other half did not associate the success or failure of their business to their education.

Operators with a higher education level do not earn more income than others in terms of income. However, people think that operators with a relatively acceptable level of education could better manage their income and their Zem business. So, I can neither deny nor certify that the level of education of operators has a real impact on socio-economic well-being. (Key informant – 1)

Overall, Zem operators indicated that the level of education was not a major factor regarding the success in their business (Grand Mean = 2.8, SD = 1.3). This implies that the nature of the Zem business did not require much of academic knowledge rather than being able to handle the motorcycle itself. However, being able to handle the motorcycle could not be directly linked to socio-economic well-being.

4.10 Business Regulations and Zem Operators Socio-economic Well-being

The third objective of the study investigated the influence of government business regulations on socio-economic well-being of Zem operators in Cotonou. To accomplish the objective, a set of statements in form of five points Likert scale were posed to the respondents to indicate the extent to which they agreed or disagreed with them. The responses were coded such that strongly disagree (SD) was rated number 5 while strongly agree (SA) was rated number 1.

Further the mean responses were computed such that: a mean response of above 3.0 was considered as disagree while a mean of below 3.0 was considered as agree. Table 4.15 shows the proportion of respondents, mean responses, and standard deviations.

Table 4.15: Business Regulations and Zem Operators Socio-Economic Well-being

Statement		SD (5)	D (4)	N (3)	A (2)	SA (1)	Mean	S.D
In addition to compliance with safety requirements, a permit from the regulatory authority is also required to carry out the Zem activity in Cotonou.	f	37	177	26	111	44	3.13	1.24
	%	9.4	44.8	6.6	28.1	11.1		
The process of starting the Zem activity in Cotonou takes a long time	f	112	130	60	52	41	3.56	1.31
	%	28.4	32.9	15.2	13.2	10.4		
The amount of taxes and fees to be paid annually or monthly is high (which limits my entrepreneurial initiatives)	f	106	99	82	74	34	3.43	1.29
	%	26.8	25.1	20.8	18.7	8.6		
Local and national government offer special support to people who want to start a different new business.	f	58	52	204	31	50	3.09	1.13
	%	14.7	13.2	51.6	7.8	12.7		
In the past, there have been decisions or projects aimed at reducing and limiting the number of operators in the Zem sector in Cotonou.	f	70	86	170	46	23	3.34	1.10
	%	17.7	21.8	43.0	11.6	5.8		
Grand Mean							3.4	1.2

n = 395

Table 4.15 shows that over half of Zem operators disagreed that they were required to have a business permit while 39.2 % agreed. Thus, the reaction was varied ($M = 3.13$, $SD = 1.24$) implying that some of the members might have plunged into the sector oblivious of the operating conditions. According to some of the interviewed key informants, just like other business operators, motorbike transport operators were expected to have an operation permit where each operator was issued with a number. Through the permit system, the government was aiming at raising some revenue and keep track of the number of people in the sector.

However, comments from key informants portrayed a scenario where the regulatory authority has lost control of the Zem sector and that most of the operators were never bothered to acquire the operation permits. Some of the comments were as follows:

There is no regulation that favors us, the poor to get out of precariousness. It is only the regulatory vacuum that benefits us. And this is the basic feature of the informal economy where the poor also, earn their daily bread.

(Key informant – 1)

The simple driving license that NGOs give them free of charge after a few days of training, they do not see the need for this training. Many do not even want to register with town hall although they are regularly hounded for it. They prefer to stay forever as permanent illegal drivers.

(Key informant – 11)

The foregoing findings and discussions depicts a free-lance business sector where the operators can easily become unruly. It was no wonder that 61.3% of respondents disagreed that the process of starting the Zem activity in Cotonou takes a long time. Having no feasible method of enforcing entry requirements, the only condition to start the business was being in possession of a motorbike. Similarly, 51.9 % of respondents disagreed that the amount of taxes and fees to be paid annually or monthly is high while 27.3 % agreed and 20.8 % were undecided.

The statement that Local and national government offer special support to people who want to start a different new business was refuted by 27.9 % of operators while a comparable number agreed. However, the bulk of Zem operators (51.6%) remained non-committal on the issue. On probing for further information on the same issue from key informants, the researcher found that during political campaigns, some politicians promised some assistance for improvement of the Zems economic activity sector, and a reconversion for those who wish to venture elsewhere. Incidentally, most of these promises disappear soon after elections. Likewise, 43.0% of respondents were non-committal while 49.6 % disagreed that in the past, there have been decisions or projects aimed at reducing and limiting the number of operators in the Zem sector in Cotonou'. In an effort to explain the uncertainty surrounding the promises to improve socio-economic well-being of the Zem operators, one of the key informants commented, thus:

Zem operators are a force to reckon with since they form a formidable number of mainly young population, they become an important target for politicians and other people who seek elective positions. Through their representatives, they are normally

gathered and promised many goodies such as improved shelters, free insurance, bank loans with small interest and others, all geared to improve their socio-economic well-being. In some instances, a few of them get cash money from these politicians but most of these promises are never actualized. (Key informant – 10)

The analysed quantitative data from Zem operators and qualitative data from the key informants, show that the government of Benin has put in place some regulations and measures to ensure safety in motorbike transport sector. However, while some Zem operators have adhered to these regulations, majority have remained deliberately adamant to follow while others are just ignorant. This has made open to all and sundry, resulting to economic uncertainty. Further, the government has found itself at cross-roads on how to enforce the enacted rules and regulations as the sub sector undergoes rapid exponential growth. Overall, Zem operators indicated that though there were some few government regulations to govern the industry, the enforcement was very weak. This study applied inferential statistics to ascertain the nature and magnitude to which the existing government regulations have influenced the Zem operators' socio-economic well-being. To achieve the objective the respondents, mean response values on regulations were regressed on the socio-economic mean response values as done in the next section.

4.11 Zems Financial Credit Access and Socio-Economic Well-being

The fourth objective of the study was to establish the influence of financial credit access among Zem operators in Cotonou on their socio-economic well-being. To accomplish the objective, a set of statements in form of five points Likert scale were posed to the respondents to indicate the extent to which they agreed or disagreed with them. The responses were coded such that strongly disagree (SD) was rated number 1 while strongly agree (SA) was rated number 5. Further the mean responses were computed such that: a mean response of above 3.0 was considered as 'agree' while a mean of below 3.0 was considered as 'disagree'. Table 4.16 shows the proportion of respondents, mean responses, and standard deviations.

Table 4.16: Access to Finance and their Socio-Economic Well-being

Statement		SA	A	N	D	SD	Mean	SD
I have collateral to access a bank loan	f	24	101	21	173	76	2.6	1.3
	%	6.1	25.6	5.3	43.8	19.2		
I have information on the formalities for accessing credit	f	58	86	45	100	106	2.7	1.1
	%	14.7	21.8	11.4	25.3	26.8		
The Bank repayment interest rates are manageable for me	f	44	39	82	178	52	2.6	1.0
	%	11.1	9.9	20.8	45.1	13.2		
I can cope with the loan repayment terms	f	29	53	92	112	109	2.5	1.2
	%	7.3	13.4	23.3	28.4	27.6		
My bank deposit can secure me a substantial amount of credit	f	35	84	18	130	128	2.4	0.9
	%	21.0	21.3	4.6	32.9	20.3		
My savings with a SACCO can secure me a substantial amount of loan	f	50	98	20	103	124	2.6	1.2
	%	12.7	24.8	5.0	26.1	31.4		
It's easy for me to get credit to start another business	f	47	85	48	107	108	2.6	1.1
	%	11.9	21.5	12.1	27.1	27.3		
Grand mean							2.5	1.1

n = 395

As shown on Table 4.16, majority of Zem operators (63.0 %) indicated that they have no collateral to access the bank loan. However, 31.7 % of them agreed while 5.3 % remained neutral. Further, over half of Zem operators constituting 52.1 % affirmed that they lack information on the formalities for accessing credit. Similarly, over half of zem operators (58.3 %) indicated that the bank repayment interest rates were not manageable for them. Majority of Zem operators agreed (56.0 %) that they could not cope with the loan repayment terms. However, a considerable number constituting 23.3 % were undecided while 20.7 % agreed that they could cope. Majority of Zem operators (53.2 %) disagreed that their bank deposit can secure them a substantial amount of credit. The statement that 'It is not easy for me to get credit to start another business' was affirmed by 50.4 %, however, as high as 33.9 % of Zem operators were not decided.

These findings show that a minority of Zem operators have managed to save in SACCOs, have collateral to access bank loans, and thus, can easily expand their business or even undergo economic reconversion. Further, the findings show that most of the Zem operators could be considered as not credit worthy. This situation was best captured by the comments from key informants and Zem operators:

Financial places in Benin do not deal with Zem operators when it comes to credit. So, they are excluded from access to credit because there is no guarantee on how to get back their money. Of course, vast majority of Zems do not have any collateral to apply for loan. Don't forget Zems are from the poor cluster of the society although some graduate and public officers operate among them. The basic deposit to be eligible to loan is higher for their savings. (Key Informant – 4)

I have no social network or big man to help me get a loan and finish my house. As Zem operators, we are not eligible for bank loans, so I must look for additional or another job that could allow me to borrow. (Zem operator-137)

From the foregoing, both key informants and Zem operators were candid that access to financial credit was an uphill task for Zem operators. The situation was attributed to both factual information and perceptions. The respondents' narrative seemed to suggest that they were financially excluded and disfranchised. However, one of the key informants, a finance officer with the government of Benin had a slightly different opinion, thus:

There have been attempts by NGOs to grant loans to Zems, but most of the beneficiaries were simply dishonest. The ball is in their court because it is up to them to provide the necessary guarantees and they will have access to loans like all citizens. No one is excluded from access to credit, not even Zems, but it is up to the individual to ensure that the conditions are met. When a passenger does not meet the conditions of payment for transport, do Zems allow this? The same applies to banks which are legally conducting in business. It would be too easy to say that Zems don't have access to credit. I honestly admit that access to credit is not easy for them. But that doesn't mean they are excluded either. Furthermore, access to credit alone is not enough to improve living standards. You must know how to make good use of credit, which requires a certain level of ingenuity, initiative, creativity and good management. In the case of Zems, many do not have the basic required level of education, so access to credit need to be accompanied by technical guidance and assistance. (Key informant – 15)

Similarly, another key informant -a worker trade unionist- expressed concern on the Zem business dwindling income amid rising health hazards:

The sector is really overloaded, and income keep falling as the number of operators increase. We have tried several times in vain to convert some of them to other activities so that the level of income can go up a little. We are concerned for the well-being of the Zems as well as that of the inhabitants of Cotonou because the city is subject to heavy air pollution, to which the Zems and their passengers exposed. (Key informant – 11)

It was however noted that despite the many challenges some of the Zems had success stories and no idea of exiting. One such positive Zem operator noted:

As for the question of the number of Zem operating in Cotonou, we appreciate it differently because the one who succeeds despite the challenges does not complain. Moreover, nobody complains about the number since we all continue to operate in the sector despite the plethora of figures and the competition of results, which has appeared (Key informant – 8).

Overall, Zem operators were found to lack financial credit access mainly due to the lack of credible collateral, lack of savings, as well as negative perception regarding the nature of their business (Grand Mean = 2.5, SD = 1.1).

4.12 Regression Analysis and Hypotheses Testing

Through multiple regression analysis, the study aimed at ascertaining the magnitude of influence of each predictor (independent variables) on Zem operators' socio-economic well-being. Additionally, the study aimed at determining the extent to which the combined factors influence and correlate to the level of Zem operators' socio-economic well-being. To achieve that, the mean response values for each of the independent variables were regressed against mean values of socio-economic well-being. The regression model capturing the hypothesized relationship was given as:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$, where; Y = Zem operators' socio-economic well-being
 X_1 = ease of entry ; X_2 = level of education; X_3 = Regulations; X_4 = Financial credit access
 β_0 = Constant, $\beta_1, \beta_2, \beta_3$, and β_4 , = Coefficients of X_1, X_2, X_3 and X_4 respectively
 ε = Error term

In order to apply the hypothesized sample model ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$) accurately to the population, certain assumptions must be met. These assumptions are:

- 1) **Linearity:** There exists a linear relationship between each predictor variable and the response variable.
- 2) **No Multicollinearity:** None of the predictor variables are highly correlated with each other.
- 3) **The values of the residuals are independent.** Observations (or individual data points) to be independent from one another (or uncorrelated).
- 4) **Homoscedasticity:** The residuals (errors) have constant variance at every point in the model.
- 5) **Multivariate Normality:** The values of the residuals of the model are normally distributed.
- 6) **No significant outliers:** There are no influential cases biasing the model.

If one or more of these assumptions are violated, then the results of the multiple linear regression may be unreliable.

4.12.1 Test of Multiple Regression Assumptions

Linearity: This is achieved by plotting a scatter diagram of the dependent variable (socio-economic well-being) against each of the independent variables as shown in figures 4.9, 4.10, 4.11, and 4.12.

Figure 4.9: Scatter plot for SEW against Ease of Entry

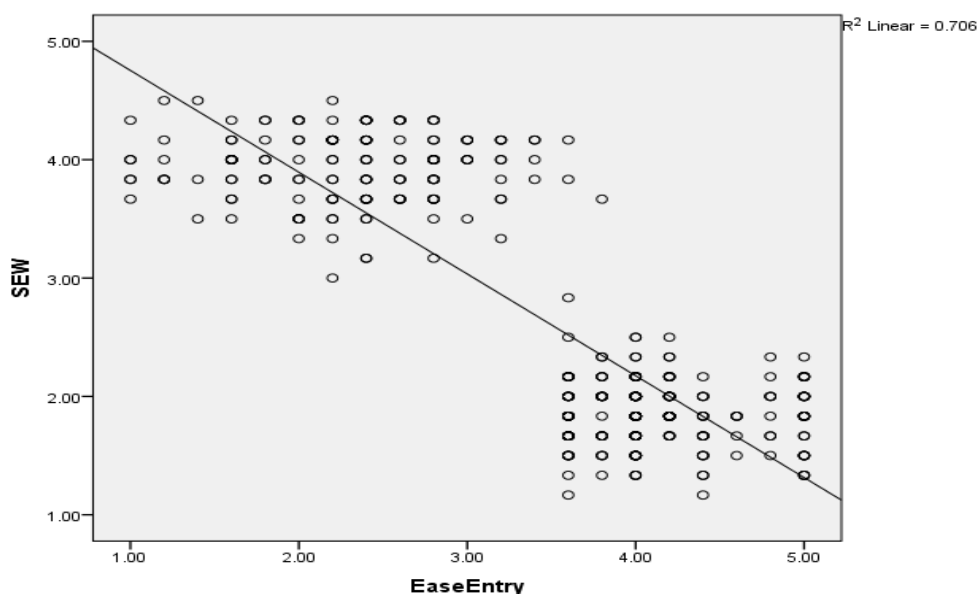


Figure 4.9 above shows that there is a negative linear relationship between SEW and ease of entry data.

Figure 4.10: Scatter plot of SEW against Zem Operators' Educational Background

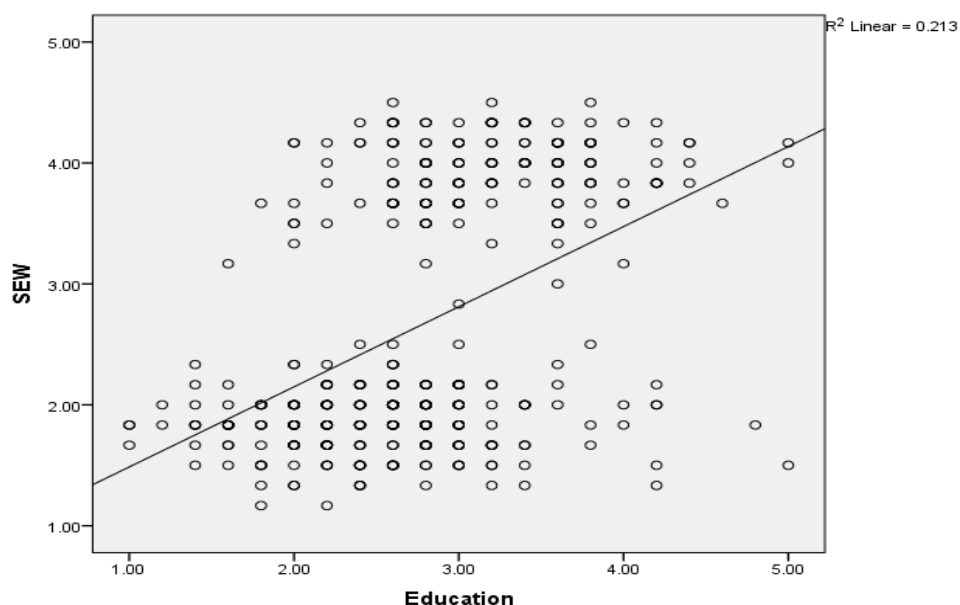


Figure 4.10 shows that there is a positive linear relationship between SEW and Zem operators' Education backgrounds. Thus, the assumption of linearity was satisfied.

Figure 4.11: Scatter plot of SEW against Zem Operators' Response to Regulations

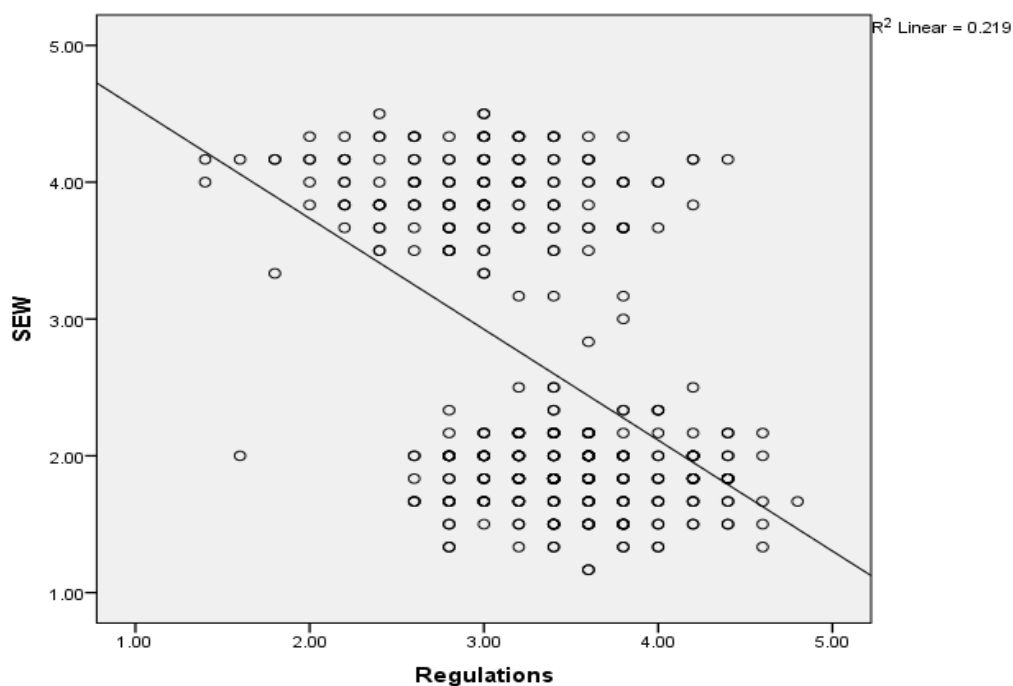


Figure 4.11 shows that there is a negative linear relationship between SEW and Zem Operators' response to regulations. Thus, the assumption of linearity was ascertained.

Figure 4.12: Scatter plot of SEW against Zem Operators Access to Finance

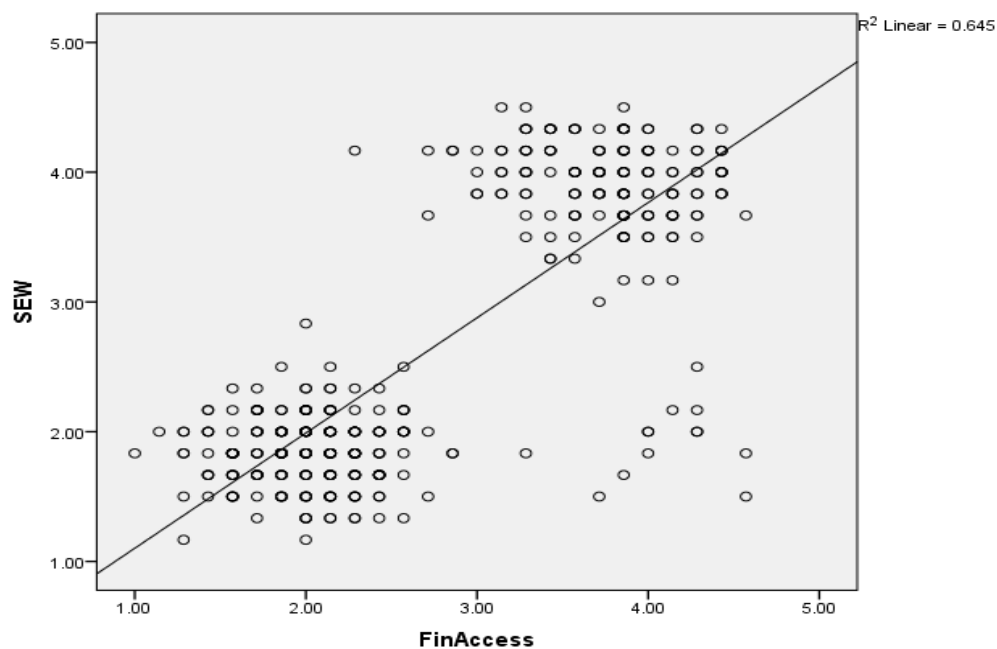


Figure 4.12 shows that there is a positive linear relationship between SEW and Zem Operators financial credit access. Thus, the assumption of linearity was ascertained.

2) No Multicollinearity

None of the predictor variables is highly correlated with each other. This is achieved by correlating all the variables as shown in Table 4.17. To avoid multicollinearity, the correlation coefficients should not go beyond the range of $-.7$ to $+.7$

Table 4.17: Correlations

		SEW	EaseEntry	Education	Regulations	FinAccess
Pearson Correlation	SEW	1.000				
	EaseEntry	-.840	1.000			
	Education	.461	-.424	1.000		
	Regulations	-.468	.396	-.270	1.000	
	FinAccess	.803	-.639	.395	-.332	1.000

As noted in Table 4.17, the highest correlation is $r = -.639$. Further, the assumption of no multicollinearity is confirmed by checking the VIF and Tolerance statistics (Table 4.22). For the assumption to be met VIF scores to be well below 10, and tolerance scores to be above 0.2; which is the case in this study.

3) The values of the residuals are independent.

Observations (or individual data points) to be independent from one another (or uncorrelated). This assumption is checked by the use of Durbin-Watson statistic (Table 4.18). This statistic can vary from 0 to 4. For this assumption to be met, Durbin-Watson value should be close to 2. Values below 1 and above 3 are cause for concern and may render the analysis invalid. In this case, the value is 1.466, which shows that this assumption has been met.

4) Homoscedasticity

The residuals (errors) have constant variance at every point in the linear model. This is accomplished by plotting the graph of the standardised values predicted by the multiple regression model against the standardised residuals obtained. As the predicted values increase (along the X-axis), the variation in the residuals should be roughly similar. If everything is ok, this should look like a random array of dots. If the graph looks like a funnel shape, then it is likely that this assumption has been violated.

Figure 4.13: Plot of Standardised Residuals against Standardised Predicted Values

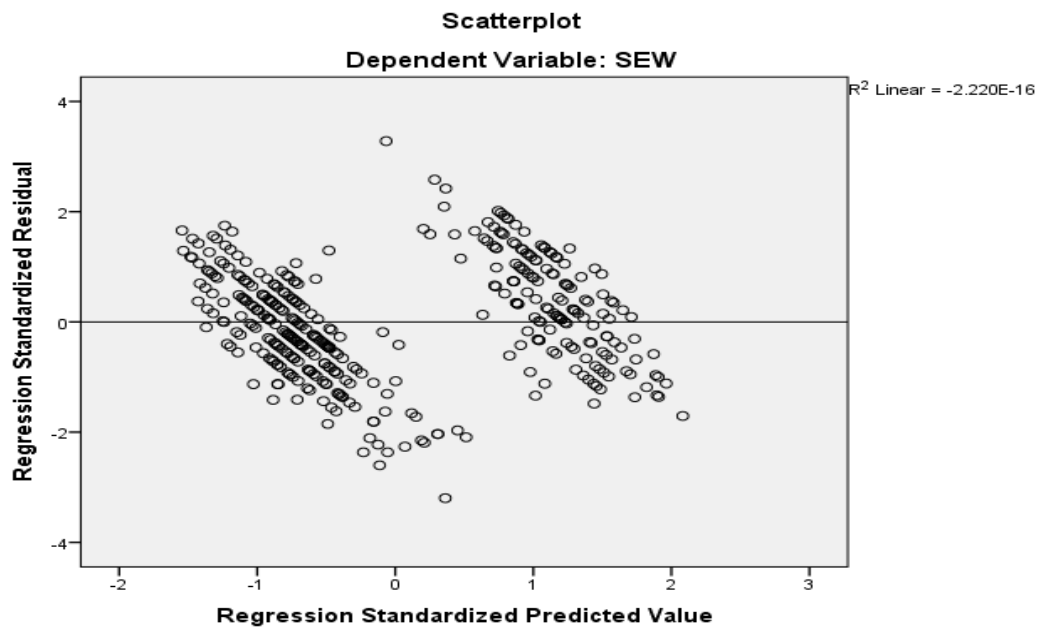
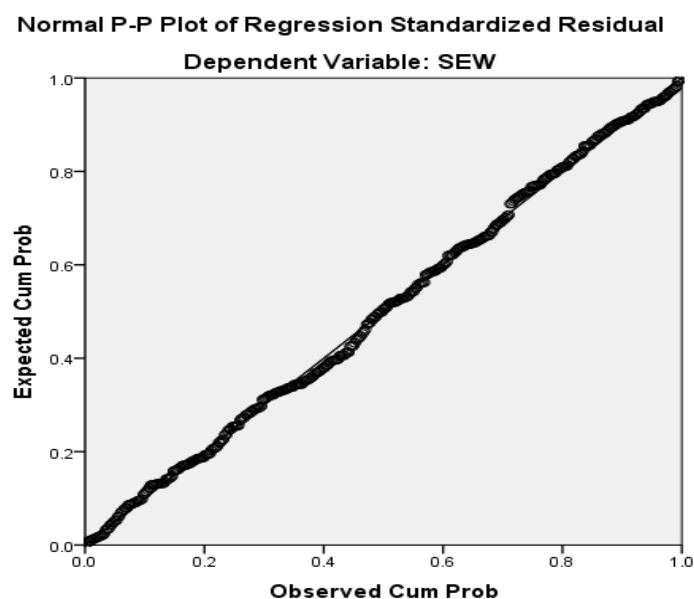


Figure 4.13 shows that the data points appear generally random as opposed to funnel-shaped and hence the residuals (errors) have constant variance at every point in the linear model.

5) Multivariate Normality: The values of the residuals of the model are normally distributed. This assumption was tested by looking at the P-P plot for the model. The closer the dots lie to the diagonal line, the closer to normal the residuals are distributed (Figure 4.14).

Figure 4.14: Normal P-P Plot of Regression Standardized Residual



As shown in the above plot, residuals are normally distributed since most of the dots lie along the diagonal line.

6) No significant outliers: No influential cases are biasing the model.

This assumption is ascertained by checking the maximum value of Cook's Distance statistic and the standard residual minimum and maximum values. For this assumption to be met, Cook's value should be less than 1, while the standard residual should be within +3 and -3. In this study, the Cook's value is .089 while the standard residual ranges from -2.697 to 2.781. Therefore, this assumption was met.

Having ascertained that the assumptions for the multiple linear regression model hold, the regression analysis to test the four null hypotheses of the study was carried out and the outcome is as depicted in Tables 4.18, 4.19 and 4.20.

Table 4.18: Multiple Regression Model Summary

Model	R	R ²	Adjusted R ²	Standard error of the estimate	Durbin-Watson
1	0.895	0.801	0.799	0.47410	1.466

Predictors: (Constant), FinAccess, Regulations, Education, EaseEntry

Dependent variable: SEW

Table 4.18 shows that the multiple correlation coefficient R , the correlation between the observed values of the dependent variable and the values predicted by the multiple regression model, had a value of 0.895. This meant that there was a very strong correlation between the predicted and observed values of Zem operators' socio-economic well-being. The coefficient of determination R^2 which is the proportion of variance in the dependent variable that can be explained by the independent variables was found to be 0.801 implying that 80.1 % of the variance in Zem operators' socio-economic well-being was explained by the influence of financial credit access, level of education, government regulations, and the ease of entry into the market. Other variables not included in this model may have accounted for the remaining 19.9 % variance. The significance of the multi-regression model was determined by analysis of variance as shown in Table 4.19.

Table 4.19: Multiple Regression Model Significance (ANOVA)

	Model	Sum of Squares	df*	Mean Square	F	Sig.
1	Regression	352.377	4	88.094	391.928	.000
	Residual	87.661	390	.225		
	Total	440.038	394			

df*- degrees of freedom.

The *F-ratio* in the ANOVA Table 4.19 tests whether the overall regression model is a good fit for the data. The table shows that the joint independent variables statistically significantly predict the dependent variable, ($F(4, 390) = 391.928, p < 0.05$). Thus, the regression model was a good fit for the data. Table 4.20 shows the multiple regression model coefficients.

Table 4.20: Multiple Regression Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig. value	Collinearity Statistics	
	Beta	Std. Error	Beta				Toler	VIF
1 (Constant)	3.666	.270			13.557	.000		
EaseEntry	-.489	.036	-.477		-13.59	.000	.414	2.41
Education	.105	.036	.073		2.886	.004	.794	1.25
Regulations	-.233	.043	-.134		-5.415	.000	.829	1.20
FinAccess	.417	.037	.377		11.133	.000	.445	2.24

Dependent variable: SEW

Table 4.20 reveals the relative contribution of the four independent variables to the dependent variable, expressed as beta weights. Assuming the error term ε to be zero and substituting the unstandardized coefficients β values, the estimated multiple regression equation becomes: $Y = 3.666 - .489 X_1 + .105 X_2 - .233 X_3 + .037 X_4$. The β values indicate the individual contribution of each predictor to the model if the effects of all other predictors are held constant.

Thus, if all factors (ease of entry, education level, regulation, and access to finance) were held constant, the level of Socio-economic of the Zem operators will be at 3.666. A unit increase in the ease of entry into Zem business industry would lead to a decrease in ZOSEW by .489, all other factors kept constant (*ceteris paribus*). Similarly, when the level of education is better by one unit, the level of Zem operators' socio-economic well-being would increase by .105 ($\beta = .105$), while holding the other factors constant. A unit increase in government regulation would induce a decrease in ZOSEW by .233 while a unit increase in financial credit access would lead to an increase in ZOSEW by .37

The four null hypotheses of the study were tested by considering the *t*-statistic (Table 4.22) that tests whether a β value is significantly different from zero ($H_0: \beta = 0$). The hypotheses were tested at 95% confidence level. All factors were significant as *p*-values were less than 0.05.

4.12.2 Hypotheses Test Results

H₀₁: Ease of entry into Zem business in Cotonou has no statistically significant influence on Zem operators' socio-economic well-being

In reference to Table 4.23, the unstandardized beta value for ease of entry was found to be significantly greater than zero ($\beta = -.489$, $t(394) = -13.59$, $p < 0.05$). Subsequently, the first null hypothesis was rejected. It was, therefore, inferred that ease of entry into Zem business in Cotonou has a statistically significant negative influence on Zem operators' socio-economic well-being. In other words, the ease of entry enables many people to enter the motorbike transport business and thereby compete for almost the same number of customers, hence diminishing returns. Subsequently, the reduced earnings have a negative influence on Zem operators' well-being.

H₀₂: The educational background of Zem operators has no statistically significant influence on Zem operators' Socioeconomic well-being

Table 4.23 shows that the unstandardized beta value for the level of Zem operators' education was significantly greater than zero ($\beta = .105$, $t(394) = 2.89$, $p < 0.05$). Subsequently, the second null hypothesis was rejected. It was, therefore, inferred that Zem operators' level of education had a statistically significant influence on their socio-economic well-being. This implies that the academic education possessed by the Zem operators helped in conducting their business and thus impacted positively on their socio-economic well-being. The educational background's significant positive influence on the operators' socio-economic well-being could be linked to the notion that improved educational background in terms of qualifications, skills and competencies leads to feasible business decisions and operations and hence, better socio-economic well-being.

H₀₃: Government business regulations have no statistically significant influence on Zem operators' socio-economic well-being

In reference to Table 4.23, the unstandardized beta value for business regulations is significantly greater than zero ($\beta = -.233$, $t(394) = -5.415$, $p < 0.05$). Thus, **H₀₃** was rejected, implying that government regulations had a statistically significant negative influence on the Zem operators' socio-economic well-being. Thus, the third null hypothesis was rejected,

implying that business regulations had a statistically significant negative influence on the operators' socio-economic well-being. In other words, the Zem operators' non-adherence to the business regulations and government failure to enforce, resulted to saturation of operators, leading to less income and hence negative impact on operators' socio-economic well-being.

H₀₄: Finance credit access has no statistically significant influence on Zem operators socio-economic well-being in Cotonou.

Table 4.23 shows that the unstandardized beta value for the level of Zem operators' financial credit access was significantly greater than zero ($\beta = .417$, $t(394) = 11.133$, $p < 0.05$). Subsequently, the fourth null hypothesis was rejected. It was, therefore, deduced that Zem financial credit access had a statistically significant influence on their socio-economic well-being.

4.13 Reconversion to boost Zem operators' socio-economic well-being

Objective five of the study was to explore how Zem operators can make the transition to sustainable economic activity to improve their income and social well-being. To achieve this objective, the study examined the causes of their declining living conditions, the socio-economic and demographic characteristics of those who expressed their intention to abandon Zem if given the opportunity, the alternative reconversion activities to be considered, and the ways to improve their socioeconomic well-being. The findings were constructed using themes that resulted from the analysis of key informant interview data and open-ended questions administered to the surveyed operators. To this end, the study addressed a number of questions to Zem operators and key informants, the first set of which was essentially aimed at establishing respondents' opinions on the genesis of the decline in the living conditions and overall socioeconomic well-being of Zem operators in Cotonou, as well as possible solutions. The second set of questions focused on how Zem operators could undergo a sustainable economic reconversion that would lead to a desirable level of socio-economic well-being. This section concludes with some vivid stories of former Zem operators who have transitioned to alternative occupations, as well as ideas from Zem operators still in activity on how to improve their socioeconomic well-being.

4.13.1 The Declining Living Conditions of the Zem Operators

Regarding the deteriorating living conditions of Zem operators, key informants were requested to opine on the current sustainability of Zem's once-flourishing business model. From their comments, three main themes emerged that depict the essential causes of the decline in the living conditions of Zem operators in Cotonou. First, competition in the Zem industry, translates into the easy entry and start-up conditions, reflecting a certain laxity in regulation, which results in massive entry and a plethora of Zem service providers (15 key informants, or 100%). Second, the level of education of Zem operators in terms of schooling, skills, qualifications, and competencies was mentioned (9 key informants or 60%). Having a decent level of education would not only assist Zem operators in better managing their income more effectively, but also in better predicting market trends more accurately, planning for the future by making appropriate decisions, taking the right actions, and being proactive as they can diversify their income sources or shift to other activities. Thirdly, for this to happen, there is a need for easy access to financing. Zem operators mentioned by 14 key informants or 93%, pointing to Zem operators' limited access to finance as part of the reason for their declining living conditions.

Zem plethora and effects on operators SEW

Regarding the number of Zem transport service suppliers in Cotonou, the fifteen key informants showed a consensus (100%) that the Zem industry in Cotonou was overloaded, which had an impact on the operators' income. As one only needs a motorbike to start making instant cash, interviewees attributed the profusion of Zems to the ease of entry into the industry, the high rate of unemployment and underemployment in Benin, the relatively affordable access to motorbikes, and the lax control by the bodies supposedly in charge.

Regarding the size of the Zem industry in Cotonou, a key informant, an official of the Cotonou City Hall, stated the following:

The sector is overloaded, and the income keeps dropping as the number of operators increases. We have tried in vain to reconvert some of them to other activities to raise the level of income a little. We are concerned about the health of the Zems as well as that of the inhabitants of Cotonou, the city being exposed to serious air pollution, with Zem operators and users the most exposed. The Zem cause a worrying public health issue in Cotonou to which a solution must be found urgently. We are trying at the City Hall of Cotonou, but without real success. (Key informant – 11)

Another key informant emphasized the effect of ease of entry into the Zem industry as a driving force behind the sector's overload.

... First, there are no more jobs for young graduates, nor markets for craftsmen coming out of apprenticeships, that's one. Two, the business environment, including access to finance, is not conducive to encouraging engagement in other activities. Three, the main reason is that Zem seems to be the easiest business to start. The sector is open to anyone who owns a motorcycle and wants to earn some cash. Thus, due to the lack of any entry controls, many illegal operators enter at times and the competition gets even tougher, resulting in lower incomes. (Key informant – 1).

As for the causes of such a large number of people operating in the Zem sector in Cotonou, other key informants, including members of Zem unions who are current or former operators, were keen to distinguish between the reasons for the overload of the sector. The explanation for the massive entry into the sector by the unemployment or underemployment situation in Benin was thus relativized by this operator as follows:

There is a relatively high number of graduates among the Zems, which suggests that the problem of unemployment is at the core of their choice to join the Zem. However, the involvement of civil servants makes me think that the overloading of the Zem industry is not just due to unemployment. It is also due to the ease of entry to operate in the industry. (Key informant – 4).

The proliferation of Zem in Cotonou also appears to be caused by the failure of the administrative systems at the local and national levels. It is also due to the migration of rural youth to Cotonou as explained by this key informant:

Neither the local nor the national government has been able to put in place an effective system to control entry into the Zem industry. This has resulted in Zems proliferating in Cotonou, especially as young people migrate from rural areas to Cotonou where the business seems more profitable. Having no idea of the challenges that life in Cotonou holds for them, these young people often end up being the face of the poor living conditions of the Zem operator in Cotonou. (Key informant - 3)

Incidentally, the number of Zem service providers in Cotonou was not perceived by all the participants in this study, in the same way. For this key informant, the plethora of competitors in the Zem market does not appear to be a major concern as it is portrayed:

The issue of the plethora of Zem service providers operating in Cotonou is experienced from different perspectives. Those who manage to get by despite the stiff competition do not complain. No one seems to care about the plethora of competitors since we all continue to operate every day, no matter what (Key informant - 8).

The exponential growth in the number of Zem operators in Cotonou poses a real problem in terms of the socio-economic well-being of operators. Moreover, this swarming of Zems is not just a matter of operators' socio-economic well-being, but also a real problem of public health issue. Public authorities are seriously concerned about this as stated by this key informant, a government official:

Apart from the recurrent accidents in Cotonou in which the Zems are often involved with injuries and deaths among them, air pollution in Cotonou is also a silent killer. And all this poses a real public health issue ... We are not saying that the Zems are the only ones responsible for the air pollution in Cotonou, but their huge number contributes significantly. Moreover, they pay the heaviest price for this pollution as they are the most exposed to it. Studies have shown that the rate of respiratory diseases is higher among Zem operators (Key informant - 11).

Similarly, another key informant, from civil society, and an economist, moreover, probably drew on this classical economic theory to predict a decline in the socio-economic well-being of operators due to the fierce competition instigated by their numbers in the Cotonou Zem transport service market, and the subsequent drop in income. He explains the pattern as follows:

When examining the evolution of the profit level, and the sporadic entry of illegal operators, including civil servants, students and others, the functioning of the Zem market refers to the notion of industrial economics known as the 'theory of contestable markets. A market is said to be contestable when you can enter without any barriers, and if there is a profit, you capture that profit, and you exit at a very low cost as well. It is probably this characteristic in the Zems markets that enables illegal operators to enter the industry. Entry and exit into the Zem industry would be easy as long as there were no discriminatory costs which might cause barriers to entry and/or exit. However, this needs to be tested. If the Zem industry is a contestable market, this implies that the pure economic profit in this market will vanish over the long run. It means that any Zem who enters this market will be earning just enough to cover the cost of his humanitarian efforts, meals for refreshments, depreciation of the motorbike, fuel costs, etc. (Key informant – 13).

The foregoing discussion brings to the fore two important findings: first, the government measures to regulate the Zem industry are ineffective, and the sector is overloaded with legal and illegal operators. As observed by most of the key informants, control of new entrants into the Zem business being one of the readily available contestable markets, will remain almost impossible amid high unemployment among school leavers and a deteriorating economy. Secondly, the Zem business earnings are on the decline, while health issues arising from the business are becoming more evident. Thirdly, from the economists' side of view, the Zem business profits can be improved by taking certain drastic measures which require various government interventions.

Level of Education

The Zem economic activity attracts people of all educational levels. However, this study reveals that the majority of the Zem operators in Cotonou (278 or 70.4%) have received primary or secondary education. The sector even includes 75 university-level operators, representing 19.0% of the operators surveyed. Although some operators in Zem claimed that education was not an important factor in the success of their business as an influence on their socio-economic well-being, most key informants, including 10 out of 15 who were veterans or still active operators, argued otherwise. They felt that a reasonable level of education not only allowed the Zems to develop their vision for the future but also proved their ability to implement what they learned more effectively, for better management of their social and economic well-being. More importantly, the level of education was considered essential in the eventual ability of Zem operators to successfully reconvert. The following are some of the verbatim responses cited by some key informants.

After graduating from secondary school, a friend joined the Zem to finance his further education and eventually became a civil servant where he enjoys enviable living conditions. Likely, most successful Zems are essentially those with educational backgrounds. It seems that those with a good education have a better chance of finding another job. In any case, Zem operators with better education certainly have more opportunities and chances. (Key informant - 1)

Based on the example of some of the Zem operators, this other key informant believes that some Zems do not bother to work overtime. They give the impression of being able to manage their financial assets better. These seemed to be operators who have a better education. Though one might think that these operators have developed a symbolism of Zem activity as temporary work or a supplement to their salary, or perhaps they are students, those with a good level of education likely develop an approach to Zem activity which is more relaxing than stressful.

Those who are educated know better how to manage their income, and their time to alternate between operation and rest. They don't complain so much about the activity not doing well, they seem to be satisfied and less stressed, probably because Zem activity is a part-time job, or maybe they have applied for a job which may come up soon. I don't know but educated operators seem to be better off. Those who often move away from the sector to other activities are in majority the of educated ones. (Key informant – 3).

In addition, basic education was considered important, as, for some Zems, their level of education serves as an initial requirement that enables them to better assimilate the technical training and asset management training that NGOs occasionally offer.

Education is very important. Do you know why? The Zem industry in Cotonou is overloaded because, among other things, these people did not go far enough in school; some do not even have non-formal education or training. Everything must be learned, and education is the key to acquiring skills, competencies, and qualifications. Even cultivating the land as we do in our rural areas, which does not require any intellectual effort, must be learned. Imagine those who were born in the city; how do you expect them to know how to cultivate the land? So, when people have no education, no training, and even no apprenticeship, there is no alternative for them but to engage in Zem. (Key informant – 11).

Thus, considering the foregoing responses and discussion, it emerges that education is crucial in Zem business and reconversion. Since the majority of Zem operators are primary and secondary school leavers without any vocational training, the government and other stakeholders must combine synergy and offer appropriate training and advice for effective reconversion.

Access to finance

Limits on access to financing were mentioned by the Zem operators interviewed as one of the factors impeding them from breaking out of dependence on the Zem activity as their sole or unique source of enrichment. Key informants were also interviewed to get their views on the matter to clarify and deepen this information. As a result, the issue of Zem operators' access to finance and how this affected their living conditions were probed with Zem Union representatives, ex-Zems who had switched to alternative activities, as well as other informed key informants from the Cotonou town hall and government officials. The viewpoints summarised below reflect the overall general trend of the various viewpoints expressed by the participants surveyed on the subject of Zem operators' access to financing and its impact on their SEW.

From the point of view of Zem operators, whether they are still in business, former operators who have converted to another activity, or members of Zem unions, access to financing can be a motivating factor for conversion. Some operators have been considering moving to agriculture for years, but their plans have yet to be put into action due to a lack of funding.

As soon as I find funding, I will immediately stop the Zem to implement my "Laboko" project that I have carried on paper and in my heart for years. It is a very nutritious yam species that are endangered. Don't you think that my reconversion can make a difference and even inspire others? (Key informant - 9)

A former Zem operator reported that having access to finance enabled him to undertake another activity that provides him with more time off, less stress, and thus better health than when he was working as a Zem transport supplier.

The Zem was giving me instant cash until my motorbike broke down and I could not afford to fix it. Thanks to an NGO that initiates small projects for the poor, I was able to start a small business selling groceries. This saved me from the Zem, which was killing me. I sleep better. Moreover, I no longer buy medicine as I used to. (Key informant - 2).

On the challenge of access to finance, a financial officer interviewed attempted to shed light on the complexities of the issue of Zem operators' access to finance, as he stated:

How do you expect us to lend money to a Zem operator? The guy doesn't even have an identity card (ID). Some of them operating here in Cotonou have no shelter. We lend money on collateral, and how do you expect these people to find guarantees? In the past, we had some bad experiences with these guys. Now, I am sorry, but Zem operators do not have access to credit in our institution. I am talking about real Zems such as immigrants from rural areas to operate in Cotonou, or unemployed graduates, not civil servants who illegally engage in this activity. (Key informant - 15)

The foregoing discussion brings to the fore the findings regarding the causes of the declining Zem economic model and hence the decline in Zem operators' socioeconomic well-being. Thus, the Zem industry has been reported to be overrun by massive influxes of legal operators but also by a significant presence of illegal operators, as government attempts to regulate the industry have proved ineffective. The level of education of Zem's operators was not overlooked, as interviewees felt that it had an impact on their socioeconomic well-being. In addition, lack of access to finance was also reported as influencing the socio-economic well-being of Zem operators. These findings further communicated why as many as 334 people, or 84.6% of the operators surveyed, wanted to quit for alternative livelihood opportunities. Consequently, for potential targeted reconversion plans, the study considered it worthwhile at this point to identify the socioeconomic and demographic characteristics of operators interested in reconversion.

4.13.2 Reconversion and socio-demographic features of Zem operators

As part of improving ZOSEW through potential reconversion, operators were asked whether they would consider taking up another job if given the opportunity. The findings of the study indicated that a total of 334 operators, accounting for 84.6% of the Zem operators pooled, declared their intention to undergo reconversion. In contrast, 61 operators, equivalent to 15.4% of the sample, did not declare any interest to pursue reconversion. Though willingness may not be a guarantee of success in occupational reconversion, the survey results nevertheless demonstrate that the decision to transition into a new job appears to be influenced by willingness.

This section highlights the socio-economic and demographic background of Zem operators in connection with the willingness to reconvert if given the opportunity. Cross-tabulations of age, work experience, representation of the Zem occupation (symbolism of the Zem activity), dependency, income, and the locality where Zem operators grew up were used to determine which profiles were most amenable to reconversion.

Table 4.21: Socioeconomic categories more reconversion-prone

Socioeconomic Backgrounds		Willingness for Reconversion	Freq	%
Age		26 - 45	234	59.24
Working experience		10 years and below	275	69.62
Dependency	Marital status	Married operators	225	57
	Household size	1 - 3 & 3 - 6	261	66
Representation of Zem (symbolism)		Temporarily or supplement job	253	64
Educational level		Upper secondary & University	161	40.75
Monthly earnings		Less than \$100 (~ Fcfa 50000)	235	59.95
Grown-up locality	Rural area	Operators who grew up in a rural area	174	44
	Urban area	Operators who grew up in an urban area	221	56

The analysis of conversion intentions by socio-economic and demographic characteristics was useful in this study. It has made it possible to identify more specifically the

socio-economic and demographic characteristics of the operators who opt most for reconversion. These findings will contribute to designing more target-oriented reconversion policies.

As presented in Table 4.21, in the age category, the operators most willing to reconvert are the age group of 26 to 45, accounting for 234 operators representing 59,24% of the respondents, with more than half of them (136 or 58.11%) even younger as they posit in the 26 to 35 cohort. This suggests that life expectancy, ambitions, and hopes for the future, positively influence the decision to retrain. In the "marital status" and "dependency" categories, the results show that married operators (225 or 57%) and operators with one to six dependents showed more interest to reconvert, suggesting an influence of family responsibilities on the decision to reconvert. Regarding the representation or symbolism of the Zem occupation, 253 operators, representing 64% of the operators surveyed, declared their willingness to reconvert. This was expected since, from the beginning, these operators considered the Zem as a temporary job while hoping to find a more stable one, and others considered it just as a salary supplement to round out their income. As for the level of education, 161 operators (40.75%) with an upper secondary or university level of education declared their willingness to reconvert, which suggests an influence of the level of education on the choice of the type of employment.

Concerning the category "working experience", the analysis showed that operators with 10 years or less of experience in the Zem activity, numbering 275, i.e. 69.62% of respondents, are part of the group of operators who are willing to reconvert. This may reflect a lack of experience in coping with declining incomes in the sector, as they struggle to meet their daily income targets. 235 operators representing 59.95% of the respondents who earn less than 50,000 FCFA (\$100) per month have considered conversion to alternative sources of income as a solution to their precarious living conditions. The willingness to quit Zem occupation is even more pronounced among more than half of them (134 operators i.e, 33.92%) with an income of fewer than 25,000 FCFA (\$50) per month. This suggests the economic influence of income on reconversion decisions.

Considering the locality where Zem operators grew up, the willingness to reconvert is higher among operators who grew up in urban localities (221 operators i.e, 56%) compared to those who grew up in rural localities (174 operators i.e, 44%). These results suggest discomfort with the urban lifestyle of the Zem occupation, confirming also the perception of the Zem job as a temporary alternative to unemployment in Benin.

4.13.3 Reasons for Zem Operators' Willingness to Reconvert

When asked about the reasons for their willingness or not to leave the Zem operation, respondents (active Zem workers and former Zem workers who had already transitioned to other activities) reported a variety of reasons ranging from dissatisfaction (unsatisfactory job characteristics, unsatisfactory working conditions, and unsatisfactory working context) to health problems (physical and psychological health issues), re-qualification (job and skills/interests adequacy), social values (social and family values, work-life conflicts), economics motives (declining income, reduced savings, limited achievement), disgust or loss of interest in Zem occupation. Some even have no reason (decision to reconvert on a whim or a crush). Thus, adopting an analysis grid based on the approach of identifying emerging themes and co-occurrences, the qualitative analysis of the data relating to Zem operators' willingness to reconvert revealed the existence of six groups of motives underlying the Zem operators' willingness for reconversion as presented in Table 4.22.

Table 4.22: Overview of the motives behind ZOs' willingness for reconversion

	Themes	Sub-themes	Frequency	Saliency
WILLINGNESS FOR RECONVERSION (334 = 84.6%)	Health issues	Physical health issues	89	
		Psychological health issues	38	127 (38%)
	Dissatisfaction	Unsatisfying work characteristics	8	
		Unsatisfying working conditions	26	47 (14%)
		Unsatisfying working context	13	
	Economic issues	Declining income	58	
		Reduction in savings	26	102 (30.5%)
		Achievement's difficulties	19	
	Disgust and loss of interest in the occupation		10	10 (3%)
	Social Values	Work-life balance	21	
		Self-image issues	6	27 (8%)
Fitting job and skills/interest (adequacy)		26	22 (6.5%)	
NO WILLINGNESS FOR RECONVERSION: (61 = 15.4%)				

The themes and sub-themes describing the reasons Zem operators were willing to reconvert are described in this section, along with the frequencies and co-occurrences among respondents as well as information on the distribution of willingness for reconversion (table 4.24). Illustrations are provided by quotes from respondents that are thought to be excellent exemplifications of each theme and sub-theme.

Health issues

One hundred and twenty-seven (127) ZOs, representing 12% of the reconversion intentions, as shown in Table 4.24, expressed their willingness to consider alternative jobs to the Zem operation if given the opportunity. The reasons behind their willingness to reconvert are mainly related to health issues, as they feel they are facing physical or psychological health problems. Physical health problems such as fatigue, back pain, eye problems, sexual weakness, etc. justify the ZOs' desire to retrain. Eighty-nine (89) of the respondents cited physical health problems as the main reason for their willingness to consider alternative employment. Respondents 62 and 231 respectively expressed their desire to leave the Zem activity for health reasons, stating as follows:

I have sinusitis, and despite my mask constantly tightening on my face to avoid the dust and gases emitted by the vehicles, my health is continuously deteriorating. Some of our comrades have even developed serious respiratory diseases". (Respondent 62)

I am developing chest pain and on top of that, I can't recline for more than 2 minutes because of the back pain. I wonder if I would still be able to stoop to cultivate (Respondent 231)

Regarding psychological health issues, they were related to stress, depression, burnout, or nervousness issues. Respondent 304, expressing his desire to reconvert to another income-generating activity, mentions his health reasons in this way:

I always become aggressive when my daughter does not revise her lessons. Even a simple joke from my wife becomes a big issue at home. I was told that this could be due to the Zem activity (Respondent 304).

Respondents 19, and respondent 94 give their health-related motives to reconvert declaring what follows:

I often feel tensed and nervous as the day progresses, especially when I am far from my daily target (Respondent 19)

The anxiety of tomorrow is eating away at me and keeps me up late at night, not knowing what my family will live on without this work that is increasingly not giving. (Respondent 94)

Dissatisfaction

The dissatisfaction crescendos as the operators realise the growing gap between their aspirations in terms of work that is supposed to ensure their freedom and happiness, and their current and future conditions in Zem economic activity. Forty-seven (47) ZOs were unsatisfied with their Zem economic activity.

The dissatisfaction leading to the willingness for reconversion is manifested through the very demanding characteristics of this job as expressed by eight (8) ZOs including this respondent saying:

I used to get up early in the morning every day except one Sunday in the month to go to church when I could... I would start at 4 am after praying to God to give me the first earnings of the day for my children's breakfast at school. I would come back at about 7 am to drop them off at school, then rest a bit before hitting the road for the whole day. As the business was no longer efficient, I would work overtime and come home late at night because I had to cover household expenses, send money to the village, pay the rent, and save a little for health, funerals, and other social contributions, etc. Imagine if there was even one day when I didn't get on the bike. (ex-Zem). Come on! This situation could no longer last. So, I just decided to quit and look for an alternative before I was finished or died from my wife and children. I join the real estate sector as a real estate canvasser. (Key Informant 4)

Twenty-six (26) ZOs link their dissatisfaction to Zem's demanding working conditions. Dust, sun and sometimes rain make the working conditions more hostile. The majority of Zems often work 7 days a week, and others work overtime to achieve their daily goals if only that were possible. Dissatisfaction in the context implies a lack of a desirable and fulfilling work environment and a good working climate. A respondent to consider another income-generating activity expressed his dissatisfaction with the Zem economic activity as follows

During the rainy season, the activity in Zem is not good. However, you still must work in this hostile climate; otherwise, you cannot feed your children. You constantly get flu and headaches which further weaken your immune system. This job doesn't make sense anymore. That's why I will stop for good, next rainy season, and make sure I don't get back. I will sell my motorbike and invest the money in my farm. (Respondent 244)

The dissatisfaction of thirteen (13) ZO's, relates to the fact that they no longer have any interest in the economic activity of Zem. They were no longer satisfied or fulfilled by their Zem economic activity. They felt compelled to work in this industry only by the context of unemployment. As such, they felt that they had done their time and that they had no intention to continue this line of work for the rest of their lives. This is what respondent 79 stated, accrediting his willingness for reconversion to unsatisfying Zem business context:

I don't want to end my life on a motorbike. Nine years are enough. Moreover, the job is no longer worthwhile. It's time to move on and start my cassava farm.
(Respondent 79)

Economic issues

Regarding economic issues, it should be noted that, in addition to health problems, working conditions and the working environment, the Zem operators surveyed also mentioned economic considerations as reasons for their plan to stop operating Zem and to pursue alternate income-generating activities. Faced with financial and economic problems while he still has no achievement in his occupation, respondent 7 and respondent 62 respectively stated that his willingness to seek employment other than Zem is based on the poor performance of the Zem economic activity:

My health is weakening day by day, yet my financial problems remain far from finding a solution in Zem activity. (Respondent 7)

I have been doing this Zem activity for several years, but I have not been able to achieve anything so far. I continue to ride just to earn the little money it offers daily. I am looking for additional income-generating activity or another better-paying job
(Respondent 62).

Concerned with the looming mandatory insurance that the government decided to implement next year, respondent 171 declared this:

Zem is no longer profitable. So saving is not an option for most of us anymore. Now the government has decided to impose health insurance for all from next year. Without denying the benefit for us, this is still an additional expense to come. It is already a concern for me as my children's tuition fees increase every year as they move up the school ladder. (Respondent 171)

The economic and financial hardships faced by Zem operators appear to be linked to the socio-economic phenomenon of exclusion. Respondent 137 exposes this reality of exclusion that the Zems experience simply because of the type of economic activity they engage in. Yet the Zems also contribute substantially to the economic process of the country:

I don't have a social network or a big man to help me get a loan and finish my house. As Zem operators, we are not eligible for bank loans, so I have to look for an additional job or another job that could allow me to borrow money from the institutions. (Respondent 137)

Fitting job and skills

As for the adequacy between skills, qualifications, and employment, some respondents seem determined to benefit from the social values that training and education attribute. This determines the fundamental reason for their willingness to leave the Zem sector for sectors that match their skills. They felt that they do not fit in, either because the job did not seem appropriate to them, or that the job for which they had been trained or graduated would elude them for the rest of their lives. As such, educated and graduate operators consider quitting Zem operation first and foremost due to pursuing their values and interests and to investing in job fields that are closer to their work values and skills. In this sense, an operator expressed his interest in occupations that match his qualifications and competency:

I spent many years in university to get a master's degree and I do not see why I would end up riding a motorbike. I would like to do something that is in line with my academic qualification. That is why I don't consider myself a Zem operator but just fending for myself. (Respondent 5)

Some artisanal training operators also were still looking for opportunities to join their field of qualification as expressed by this operator:

I am an electrician and for lack of work, I found myself in Zem to earn money and invest in the opening of my workshop. (Respondent 96).

Another operator in the handicraft sector gave the reason why he would like to leave the sector if the opportunity arises:

I am trained as a carpenter, but I can't practice because I don't have my certificate of completion yet. I am doing Zem just looking for the money to get my certificate, as I am eager to start the carpentry I have been trained for.
(Respondent 225)

Disgust and loss of interest in the occupation

In terms of disgust and loss of interest in the activity, 10 Zem operators representing 3% of the intention to reconvert, found themselves among operators with the willingness to reconvert. Only they have not mentioned explicit reasons for quitting. These intentions to reconvert sounds like crushes or whims. However, these operators seek, through a change of profession, to achieve objectives or ideals that may not yet be clearly thought out, or sufficiently discerned. However, through occupation change, these operators seek to achieve objectives or ideals which are perhaps not yet clearly thought out or sufficiently discerned. This hesitation can be seen in the words of this operator who wants to change profession but has no clear motive:

It is not necessarily a matter of money, because I'm self-sufficient. I do not have a wife or children; I would just like to change as soon as an opportunity arises. That's all! If you come back tomorrow, maybe I will have found a valid reason for my intention to quit. (Respondent 353)

Social Values

The desire to reinvent oneself differently and to fulfil oneself suggests another reason for the desire to change jobs. Thus 27 participants in this study mentioned the search for a positive self-image through social values and the work-life balance issue.

Concerning the positive self-image, six (6) ZO's mentioned a devaluing social perception as a reason for their willingness to reconvert. These are mainly Zem operators who are banned from certain places such as offices and education centres when they wear their work clothes, i.e. the distinctive yellow jersey of Zem operators in Benin. This social label, which affects their status as workers, creates frustration and dissatisfaction among most Zem operators, and leads to a negative self-image. . As for the reasons for their willingness to quit the Zem sector if given the opportunity, respondent 308 mentioned the reason for this kind of frustration as being a victim of stigmatisation at the National University of Benin, where he had studied:

When I go to the National University where I studied, and because of my work clothes, I am no longer welcome in this environment which frustrates me a lot. (Respondent 308)

Another one brought about the same self-image as his children may be affected by the image of Zem operator associated with their father, no matter if they live on the income from this activity:

My children are not necessarily proud of the jobs that feed them, because of the social label attributed to Zem activity in Benin and particularly in Cotonou. (Respondent 213)

Concerning work-life balance, twenty-one (21) ZOs lamented the absence of social values in the Zem enterprise sector. Thus, the development of a positive self-image as workers, but also as heads of families, is a concern for Zem operators in Cotonou. Work-life balance also includes for these ZOs, investing in a professional field that is more compatible with their socio-professional values and that responds to their life principles and ethics, such as being able to be there for their children, taking care of their parents, and enjoying the gift of life alongside the need to work. Considering with annoyance the recurrent daily challenges he faces in his job to meet his core social values, respondent 34 voiced his feelings by saying:

I am tired of working overtime and coming home late at night, I would like to have a day job mode just to be with my family, attend funerals, and be able to go to the stadium with my friends to watch time-to-time games of "the squirrels", the national football team of Benin. (Respondent 34)

Unwillingness or Reluctance to reconversion

While 334 ZOs representing 84.6% the willing to consider an alternative economic activity, 61 ZOs representing 15.4% expressed disinterest in opting for reconversion to other alternative income-generating activities. Some operators declined to consider alternative occupations to the Zem, even when given the opportunity. The reasons for this attitude are attributed either to old age, lack of education or training, and therefore lack of qualification, skills, competencies, or even creativity, etc. This Zem operator (respondent 199) uttered his wish to remain in the Zem operation given his relatively advanced age, and hence lack of customised jobs:

Given my advanced age, giving up this activity that I have been doing for several years would not be wise at all. I think it's better that I just retire here unless you have a job for me that suits my age. (Respondent 199)

Considering qualifications, skills and competencies, respondent 309 declared:

I have not been to school; I have no training or apprenticeship. Zem is my only area of qualification as it does not require any prior qualifications or skills. (Respondent 309)

Other Zem operators, on the other hand, have declined any possibility of reconversion. Their argument is simply that they still seem to feel comfortable in the economic activity of Zem, no matter what devolves in this income-generating activity. For example, this operator, respondent 88, put forward reasons for his hobby and passion for bike riding, regarding his preference for the Zem occupation:

I'm passionate about this job and happy with the little I earn. (Respond 88).

Some, more pragmatic and opportunistic, stated that they would prefer to wait for others to leave the sector, so that they could then benefit from the substantial improvement in revenues, due to the consequent potential reduction in competition. This is what Respondent 49 stressed as follows:

I prefer to continue with Zem activity, as I hope that other operators to leave and the profit will then improve. (Respondent 49)

Ultimately, besides voluntary or involuntary attitudes towards reconversion, qualitative data analysis data suggest that some operators were more futuristic and foresighted in projecting the downward trend in activity and anticipating the side effects associated with this business. These operators who managed to anticipate taking responsibility to quit and move on to pursuits before it was too late, can be credited with a proactive attitude. Conversely, those who wait to find themselves right in front of the wall before considering a possible adjustment, can, on the other hand, be credited with a rather reactive attitude.

4.13.4 Alternative employments or activities for reconversion

Further, this study on a possible reconversion of Zem operators in Cotonou considers the importance of realism in this study by investigating the possible alternative activities according to the Zem operators themselves. In this respect, having gathered information on the motives governing the desire of Zem operators to reconvert, this study was directed towards the people concerned by the desire to reconvert. Indeed, it was important to know what other activities or jobs the Zem operators thought they would be able to embrace based on their interests, qualifications, skills, and abilities.

Table 4.23 presents the data on Zem operators who have or have not expressed their willingness to convert to alternative activities. The alternative jobs or activities envisaged by the operators willing to reconvert are mentioned in Table 4.23. Agriculture and livestock breeding was reported by 39% of the operators wishing to retrain. The creation of small businesses was reported by 24% of the operators wishing to retrain, followed by handicraft activities reported by 17% of the operators wishing to retrain; catering (food sector) and various other activities were reported respectively by 5% and 7% of the operators wishing to retrain, while 8% of the operators who expressed their wish to retrain were undecided as to the alternative activity they intended to embrace. Conversely, operators who did not declare their intention for reconversion were not concerned about possible alternative activities as shown in Table 4.23.

Table 4.23: Alternative activities to be considered for reconversion

Willingness for Reconversion	Economic activities or jobs to be considered	Co-occurrences	%
YES	Small business	81	24
	Agriculture & animal husbandry	129	39
	Handicrafts	57	17
	Catering (or food) sector	16	5
	Others	23	7
	Undecided	28	8
	Total	334	100
NO		61	--
TOTAL		395	--

4.13.5 Suggestions for Successful Reconversion in the Zem Industry?

In seeking the various views on how successful reconversion of Zems in Cotonou could be accomplished, the researcher embarked on establishing what the respondents knew about past or present reconversion projects in Benin. The response of some of the key informants was best captured as follows:

Yes, I know of president Kerekou's projects, President Yayi Boni's project, and Premier Minister Zinsou's Project which sent some Zems to India to find out with motorbike producers, the more economical and less polluting motorcycles. Unfortunately, I don't know of anyone who benefited from the reconversion projects. They didn't give any results. We did not see an effect. Maybe if Premier Minister Zinsou would have won the elections, his project could have brought something good to Zem operators. But we know well the politicians in this country. They use Zem operators for their campaigns, then they throw them away after they win. (Key informant – 1).

I have heard about several projects aimed at improving the welfare of Zem operators in terms of improving their daily earnings, savings, access to credit, access to health facilities and reconversion for those wishing to leave the business. All the economic reconversion projects launched by the governments have not succeeded in reducing

the number of Zems in Cotonou. We get the impression that this is a failure since we no longer hear about these projects once they have been proclaimed in government speeches. (Key informant – 15).

Yes, in our time, the government of President Kerekou proposed a cassava project, where Zems were voluntarily invited to join agriculture as a new activity. But how long this project was to last, or how to train city dwellers who have no farming experience, we did not know. Ultimately, it was simply a stillborn project. I heard about other projects later, but to be honest, these were more incentives to vote than real-life projects for Zems. (Key informant – 2).

The above comments from key informants showed that there have been attempts to improve the Zem industry in Cotonou. These include strategies to reduce the number of operators through retraining, investment in more cost-effective vehicles, and improving the health of operators by promoting more environmentally friendly motorbikes. These initiatives, however, have been implemented mainly by politicians whose motivations include securing popularity and electoral support. As a matter of fact, the key informants indicated that these initiatives have proved moribund despite the hype surrounding them.

At this juncture, the researcher invited the Zems, ex-Zems and key informants to come up with practical suggestions for effective operators' reconversion as part of social transformation to improve their socio-economic well-being. The following are some of the suggestions put forward:

What do you do when there is so much competition that profits are almost nil? The theory says that if you want to create profit in such a market, you must limit the number of entrants. In this case, we need to limit the number of Zem operators so that those who will be allowed to operate can enjoy a higher level of profit. Obviously, without a control strategy, this will not be effective. On the other hand, alternative livelihood opportunities must be found for those who will not be permitted to operate in the sector. I think that the failure of previous reconversion projects, including the "cassava project", is related to the fact that everyone was put in the same basket to go for agriculture.

It is essential to conduct a survey to determine the profiles of the people operating in the sector to guide them appropriately. It will also be necessary to take stock of what the authorities have already tried and analyse why it did not work, then, clearly define what is to be proposed considering previous experiences. For this approach to work, the public intervention will be needed (Key informant - 13)

First of all, there must be a commitment from the Benin authorities to deal with the concerns of Zem operators. Secondly, implement an effective urban transport system in Cotonou. Then the Zems will gradually switch over, provided that support measures are put in place to assist them. (Key informant – 7)

It would be essential to identify people's interests, skills, knowledge, know-how and power-to-do (capacity), then categorise them and then organise them according to locality. We can have rice farming, yam cultivation, maintenance of water borehole pumps, livestock rearing, etc. This is how you will find other jobs for them. Don't just start thinking about which sector. Their abilities and skills will determine which areas of work they can get involved in. (Key informant – 14).

The three verbatim quotes are a fair representation of many others. The quoted information has brought out several pertinent issues that must be addressed for effective reconversion. First, there was a convergence in the suggestion that there should be an inventory of the skills possessed by individuals in Zem operators as well as their vocational interests rather than assuming everybody should reconvert to agriculture. Secondly, an inventory of what ailed the past programmes should be taken to avoid the same pitfalls. Additionally, most of the interviewed key informants emphasized the need for the government to show total commitment through the enactment of pragmatic policies and a long road map that should transcend the change of political governments. In doing so, the succeeding governments will be obligated to continue implementing the reconversion programme while appraising the success of the implemented part.

There was also the suggestion of the government inducing rapid reconversion by improving and streamlining the urban centres' public transport, thereby, rendering the Zem operators less preferable. In such a situation, the government would well manage bus service, and if possible modern transport systems akin to what is used in developed countries. Even as Zem operators and key informants gave several ways of how the government could initiate effective reconversion, there was the need to recognize that there were several formal Zem operators who had reconverted with various levels of success. Incidentally, most of them did not reconvert through government intervention but rather through bold innovative ventures. The researcher found their restructuring journey to be of great relevance in this study. The next section captures their experience in the journey of reconversion.

4.13.6 The reconversion experience from former Zem operators.

As the saying goes that 'necessity is the mother of invention', some Zem operators were faced with very difficult circumstances that prompted them to have no choice but opt for reconversion to other occupations. Whether under duress or not, most of them were proud of their improved socio-economic well-being. The following verbatim quotes epitomize the relief achieved after an effective reconversion from Zem business.

I heard about an NGO that offered training in market gardening with funding to start the activity. I signed up for the programme because I was already looking for an opportunity to give up Zem, which was dangerously affecting my health. For the past 4 years I have been gardening, a very profitable activity, as the demand for vegetables in Cotonou is increasing. Today, I don't necessarily have a daily income, but when I sell my carrots, cabbages, salads, or flowers, I make a lot of money at the same time. On the other hand, with the Zem, I used to live on a day-to-day income. But when my bike started to get old, the repairs were consuming more money than I was making. Lifting two watering cans keeps my body balanced while I walk around my garden beds watering the crops, a healthy exercise for my body. In contrast, with the Zem, you barely walk 100 metres in a day. Your arms and feet are pretty much in the same position and your attention is riveted to the road. When you're not carrying a customer, your neck must constantly turn from side to side as you ride, to spot a potential customer. Apart from the issue of gardening land, my reconversion to market gardening offers me a more peaceful life and better physical and financial health. With good management, I think it is much better than riding a motorbike. I am very grateful to the NGO that gave me the chance for training and funding. (Key informant - 3).

This narrative by (KI-5 ex-Zem) brought to the fore that there are NGOs that offer vocational programmes for free and where Zem operators and others can benefit. Thus, such opportunities serve as eye-openers for the Zem operators who keep waiting for mega-government projects for reconversion. The experience as narrated also shows that gardening can offer a profitable alternative to the motorbike transport business and most important is the fact that it does not have any of the many health hazards associated with the Zem business. It is also likely that such NGOs have a host of several other vocational occupations that can benefit the interested people. It can also be deduced from the narrative, the ex-Zem operator is experiencing better socio-economic well-being from the fact that market gardening is offering a more peaceful life, socially and economically.

Apart from getting support from the government and NGOs, funding from family members was also found to have assisted some Zem members to reconvert to other occupations. One such member had this to say:

As a Zem operator, I caught a respiratory disease. When I was discharged from the hospital, my older brother in France asked me to stop Zem. He paid for training in fashion design which was my childhood dream and financed the opening of my workshop. The beginning was a bit discouraging and the challenges in terms of creativity and innovation were enormous. However, when my wife and I got together in this business, it started to pay off little by little. The beginning of the school year, Christian and Muslim festivities, as well as the end and beginning of the year celebrations are the peak moments of the activity. Nevertheless, there is no lack of work daily. At least in this job I no longer have fatigue issues as I used to have in the activity of Zem because I no longer work at night and I rest every Sunday. Thanks to this job, I was able to celebrate my wedding, and I continue to feed my family. (Key informant - 2)

It is also noteworthy that some Zem operators went through reconversion with mixed blessings in that the new businesses that they took upon went down due to several factors and in some instances went back to the motorbike transport business. One of such key informants narrates as follows:

When I quit Zem, I devoted myself to delivering adulterated gasoline to roadside retailers. It was less tiring and more profitable. This allowed me to also open a timber business. I reasonably needed the money to buy timber. But, the new government discouraged my activity by reducing the volume of gasoline to be transported. Then the closure of the border with Nigeria, far from affecting the politicians, is rather a blow to the livelihood of us poor people. Without my gasoline business, I could no longer finance my timber supply. I had to close my timber enterprise to take over the Zem to be able to provide for my family's daily needs, with the support of my wife, who also sells porridge that serves as breakfast for the children. (Key informant - 1)

The study findings noted that there were many exes and present Zem operators who traded in adulterated gasoline. However, although it was a popular business, its very nature of dealing with the adulterated product was somehow illegal and thus, lacked sustainability. So, it remains questionable if such businesses can serve as one case study for effective reconversion.

4.13.7 Ways to improve the socio-economic well-being of Zem operators

Finally, the study aimed to find ways to improve the socio-economic welfare of Zem operators. To this end, Zem operators, former Zem operators, members of Zem unions and other key informants were asked about the ways to improve the SEW of Zem operators. Various opinions and a number of ways to improve ZOSEW were aired as reported and recapitulated in Table 4, in this section.

For this key informant, improving the SEW of Zem operators would go through the importance of controlling competition in the Zem industry. This could improve operators' income and savings opportunities, and boost their overall SEW, as accident risks will also decrease.

Many do not officially register to operate, and the industry is overrun with many illegal operators, with the immediate consequence of lower travel prices, preventing Zem operators from saving enough. The situation can only improve if the sector is rid of, at least these illegal operators. (Key informant -1).

Another goes in the same direction by adding the social dimension of health security related to the number of operators in the Zem market in Cotonou:

To improve the level of SEW of Zem operators, it is necessary to have an effective control system capable of dissuading students and civil servants who jump into the sector and who very often are responsible for accidents that often affect a larger number given the narrowness of the cycle tracks. (Key informant – 14)

The opening and facilitation of access to finance for the Zems is also a concern for the operators. They believe that access to finance could contribute to the improvement of their living conditions through income-generating activities that financing promotes.

Financial assistance will allow me to expand my sheep farming in the village. I can also afford the health insurance that will be mandatory next year. (Respondent 118)

A trade union leader proposes to extend the opportunities that Benin's youth employment and entrepreneurship structures make available to unemployed graduates, who are also operating in the Zem area.

ADEJ selects unemployed graduates to take part in training in business plan design, small business creation and management, and other areas. Then they receive financial assistance to launch their project. It would be desirable to design a small

training course for others as well, especially those who did not go to school. This would help them to improve their living conditions. Not only the latter, but I think that the solution to the issue of improving Zem operators' living conditions, necessarily involves such initiatives. If not, this discrimination is already a well-being problem, which diverges from the official rhetoric that politicians keep harping on... (Key informant – 14).

The various opinions on ways to improve the ZOSEW highlighted by Zem operators themselves as well as ex-Zem operators, including members of Zem trade unions and key informants, are summarized in Table 4.24.

Table 4.24: Suggestions for ways to improve ZOs' socioeconomic well-being

Ways to improve the well-being of the operators
<ul style="list-style-type: none"> • Provide affordable health insurance • Improve access to finance (loans) for investment • Ensure friendly loan terms and conditions • Encouraging savings • Providing training (TVET) for employment • Technical and financial assistance and support in various initiatives of reconversion • Loosen competition in the Zem industry (downsizing) • Provide alternative activity and employment opportunities • Market opportunity and protection

As shown in Table 4.24, in terms of ways to improve the SEW of Zem operators, most of them suggested access to health care, as they consider sustainable health as a top priority for SEW. They also suggested access to finance, with better terms and conditions for loan repayment. Access to various training was part of their grievances or requests. They suggested training in business creation and management, modern agricultural techniques, handicrafts, and others.

Access to land was not left out in that they suggested access to land in rural areas for agriculture and livestock, but also access to land in the environment near Cotonou for market gardening. Related to this they also raised the issue of markets, suggesting the protection of their local markets from vegetables, meat and fish imported from abroad. Some operators raised the issue of government intervention in the Zem industry to eliminate illegal operators to loosen competition in the sector.

Some members of the Zem unions and other key informants believe that improving the social and economic well-being of operators is essentially about providing alternative employment opportunities. This requires a favourable business environment to attract investors. This also goes hand in hand with the need to provide operators with improved apprenticeships and technical training in line with the needs of industries and enterprises. Furthermore, if not better, restrictions and other conditions imposed on the informal economic sector should be reduced, as they lead to a decline in families' livelihood.

CHAPTER FIVE: DISCUSSION

5.1 Introduction

This chapter examines the findings in relation to the research objectives. The objective of the study was to examine possible reconversion in the Zem industry in Cotonou, to improve the Zem operators' socio-economic well-being. Data were collected from Zem operators using questionnaires and a key informant interview guide.

5.2 Socioeconomic and demographic Features of Zem Operators

The analysis of socio-economic characteristics revealed that Zem is a male-dominated enterprise, as out of the 420 operators surveyed, 419, or 99.7%, were male, with only one being female. This male dominance of motorbike transport echoes and supports earlier findings by Djossou (2017), Olvera et al (2020), and Alimo et al (2022). This reflects the general trend in the transport industry, where men predominate. However, women are making an impact in transport jobs, particularly in urban taxis. They are even driving cross-border buses on the Lagos-Accra route via Cotonou and Lomé. In contrast to the results of this survey, many women are even alleged to run Zem in the southeast of Benin, which borders Nigeria.

The age distribution showed that more than half of the Zem operators surveyed (204, or 51.6%), were in the 18-35 age range, while middle-aged operators in the 36-45 age range numbered 110, or 26.8%. Elderly operators were 81 (20.6%), of which 33 (8.4%) were about 60 years and older. The massive involvement of young people can be seen as reflecting the situation of youth unemployment. However, the continuous presence of elderly individuals in the Zem operation raises the question of the viability of retirement plans and chances for reconversion.

The distribution of respondents by education level shows that more than half of the operators surveyed (278, or 70.4%) were in the primary and secondary education bracket, while tertiary education levels account for 75 operators, representing 19%. Only 42 operators (10.6%) indicated that they had not undergone any formal education. A relationship between education level and choice of Zem activity can be inferred, as the low level of education of the operators seems to explain their inability to get a better job, and thus their choice to join the Zem sector. It is expected that the higher the level of education, the lower the satisfaction and

involvement in Zem, and vice versa, consistent with Djossou's (2017) findings. With the economy somewhat depressed and a labour market saturated with unemployed graduates, Zem's driving vocation could serve as an immediate and discrete economic niche for the less educated. The massive involvement of out-of-school youths drags down the development of human capital and the country's development index. This is confirmed by the research of Al-Hasan et al. (2015), who state that this massive involvement of youth in the operation of motorcycle cabs impoverishes the capacity building of technical and vocational education and training in Nigeria in particular, and thus adds no value to human capital development. As a result, the low level of education may pose a problem for the retraining of Zem workers in other activities or jobs. The presence of graduates in the Zem business may, however, reinforce the fact that in Benin, the Zem job serves as an alternative to unemployment.

The findings revealed 214 (54,17%) operators with at least 6 dependents while 155 constituting 39.3 % were taking care of seven to thirteen people. It was also worth noting that 26 Zem operators constituting 6.6 % were shouldering the burden of very large families of 14 to 16 people. As such, any negative variation in the business had far-reaching ramifications for the entire family of the operators. This burden of family care, which the Zem trade can no longer support, appears to be a constraining factor influencing the willingness of operators as bread purveyors to leave the Zem operation for alternative livelihood opportunities.

5.3 Influence of Ease of entry into the Zem Industry on the Operators' SEW

This first objective sought to establish the influence of ease of entry (entry conditions) into the Zem industry in Cotonou on ZOSEW. The majority (75.2 %) of Zem operators indicated that affordable access to motorbikes, whether through purchase, rental or entrusted by friends or relatives, made it easier for them to engage in the Zem business. This implies that various categories, including students, found it easy to get a motorcycle and join the business when free from class. It was established that ease of entry had a statistically significant influence on the operators' SEW. Higher levels of entry constraints negatively affect the SEW of Zem operators. Higher costs for start-up costs will negatively affect the SEW of operators. Also, high costs of exit are further detrimental to operators' socio-economic well-being, hence the justification for the negative and significant effect established.

This finding was consistent with Assouma (2019) whose study found that the mass importation of low-cost motorbikes made low-income people in Benin join the transport business in masse. However, the flourishing of motorbike transport is not a preserve of Benin as a country. According to Ehebrecht *et al.* (2018), the explosion of motorbike transport is a growing trend in all developing countries globally. Similarly, Starkey (2016) observes that the motorbike taxi as a mode of transport is quickly gaining popularity in many parts of the world even though structures and regulatory frameworks vary from one country to another. According to Starkey (2016), motorbike taxis have been observed to be popular in Latin America as well as in Asia, in both urban and rural areas. Further, in a study conducted in Ghana, Sri Lanka and the Philippines, Finn *et al.*, (2011) reveal that lack or inadequate alternative employment or income sources for the youth, particularly school dropouts, makes engagement in informal transport a viable option.

The majority of Zem operators (63.3 %) indicated that the lack of any strict requirements to start the Zem business makes entry open for all and sundry. Additionally, 71.4 % of Zem operators stated that they found it easy to start due to the low investment and found it easy to exit since one could easily dispose of the motorbike or engage somebody else to work on their behalf. The ease of entry and exit from business as experienced by Zem operators is best captured by the theory of the Contestable Market. According to this theory, when entry is free, and exit is free, potential competition can regulate the industry and replace the regulator. In concurrence, one of the key informants emphasized that:

the market is said to be contestable when you can enter without any particular barrier, and if there is a profit, you capture this profit, and you exit at a very low cost as well. (Key informant – 13)

However, the key informant cautioned that:

If the Zem industry is a contestable market, it means that pure economic profit will disappear from this market in the long term. This implies that any Zem who enters this market will earn just enough to cover his costs of human efforts, meals to re-energize, the depreciation of his motorbike, fuel costs, and so on.

(Key informant – 13)

In such a state, it is obvious that Zem operators will be in a vicious cycle and will hardly achieve any self and or family development. They will also have no savings and thus face a bleak old age.

The study's first null hypothesis stated that 'ease of entry into Zem transport service industry in Cotonou has no significant influence on operators' socio-economic well-being' was tested and rejected ($\beta = -.860, t(394) = -30.723, p < 0.05$). Thus, the first null hypothesis was rejected, implying that ease of entry had a statistically significant negative influence on the operators' socio-economic well-being. In other words, the ease of entry enabled many people to enter the motorbike transport business and thereby compete for almost the same number of customers, hence diminishing returns. Zem operators complained that they were doing less number of trips while they were charging less or the same price per trip in the background of ever-rising fuel prices. The finding is consistent with Finn (2011) who found that any attempt to increase fares in order to maintain a minimum level of income for operators who do not wish to leave the sector seems to be discouraging for the users hence status quo remains.

In a bid to alleviate the negative influence on the operators' SEW, several researchers have suggested various ways of handling the situation. Finn (2011) advocates, in addition to a change in the Zem market entry and purchases of services, regulatory intervention to restructure the sector to reduce the number of Zem operators. This restructuring requires the implementation of the other two theories in this study that complement the main theory of the contestable market, namely, the theory of mechanism design and the state intervention theory. In support of such a move, one of the key informants advocated for the restructuring of the urban transport sector in a way that Zem operators could be pushed to the outskirts of the town and serve as the feeder to an efficient system of cabs, buses, and railway system.

It's all about restructuring the entire transport sector in Benin. As long as an efficient transport system and structure are not implemented, Cotonou city will still experience scattered Zems... Restructuring could push the Zems into the peripheral areas where they will serve as a link between the residences of travellers and the peripheral car parks. In a reasonable number, however, they could continue earning their daily bread by dropping off passengers living in the suburbs. This will force the number of Zems to decrease, eventually. (Key informant – 12)

Though, it is noteworthy to mention that any measure that might lead to exclusion of some Zem operators without a viable alternative will lead to unemployment and insecurity in the city. At this juncture, the debate should then shift to how an avenue for voluntary as well as circumstantial reconversion of Zem operators could be achieved.

5.4 Influence of Educational Level of Zem operators in Cotonou on their SEW

The second objective of this study examined the influence of the educational level of Zem operators in Cotonou on their socio-economic well-being. The analysis done in section 4.2.2.10 shows that a large section of Zem operators (37.2 %) had received up to primary school education while 33.2 % had secondary education. It was also significant that 19.0 per cent of operators had completed a university or college education, while 10.6 per cent had not completed any formal schooling. This implied that the Zem business sector in Cotonou attracted people from all levels of education. Additionally, Zem business was found to be dominated by males constituting 99.7 % were over half of Zem operators constituting 51.6% were youth (between 18 to 35 years inclusive). This was followed by middle-aged operators (36-45 years) who constituted 27.8 %. Further, the largest percentage (73.0 %) of Zem operators had started their own families while 27.0 were single.

These findings formed a pattern that was similar to other motorcycle transport operators in several other countries in Africa. Zuure and Yiboe (2017) found that the commercial motorbike transportation business in the Agbozume Traditional Area in the Ketu South Municipality of the Volta region in Ghana was dominated by male primary and secondary school dropouts. In Kenya, Owuor (2020) found that 96.7% of motorbike transport operators (Bodaboda) in Kisumu County were male and that 69.6 % were youth below 35 years of age. Nasong'o (2015) established that all Boda-boda operators in Kitale town were male, with 86% of them being below 39 years. Additionally, 57.0 % of them had up to primary school education while 43.0 % had up to secondary school education. The study further indicated that most operators were married with children at 62% while those still single were only 14% implying that most operators have dependents to cater for within their households.

Having established the educational level and other characteristics of Zem operators, there was a need to establish whether the level of education influenced the way Zem operators conducted their business leading to disparate levels of socio-economic well-being. In addition, and more importantly, would the more learned operators have leverage in reconverting to more lucrative businesses? The analysis done in section 4.3.2 above showed that while 41.0 % of Zem operators agreed that their academic education helped them in conducting Zem business in terms of interpersonal skills, 42.3 % disagreed and 16.7 % were undecided. This implied that many operators were not certain of how education was contributing to the conduct of their business. Over half of Zem operators (52.4 %) disagreed that their academic education has enabled them to diversify their source of income while 28.9% agreed and 18.5 % were neutral.

Similarly, the statement that "*my academic education has enabled me to keep abreast with what is happening or predicted in the Zem business sector*" was refuted by 52.2 % while 33.6 % of Zem operators agreed. Thus, it was evident that about half of Zem operators appreciated that education played a key role in their business conduct while the other half did not associate the success or failure of their business with their education.

As found in section 4.3.2.1 above, the educational background had a statistically significant influence on the operators' socio-economic well-being ($\beta = .662$, $t(394) = 10.304$, $p < 0.05$). In other words, the academic education possessed by the Zem operators helped in the course of their business and thus impacted positively on their socio-economic well-being. Educational background was found to have a moderate correlation ($R = 0.461$) with socio-economic well-being. It was, however, found to account for only 21.3 % variance in socio-economic well-being ($R^2 = 0.213$).

This study's finding that education possessed by Zem operators had a significant influence on their socio-economic well-being as well as having leverage on the reconversion process was echoed by some of the interviewed key informants. One of the key informants argued that:

Some of the people in this city are in self-induced poverty because they lack the skills to plan and do things in a meaningful way. These people seem to lack opportunities, but they also lack the education that builds creativity and initiative. Without education, people are deprived of the means to think differently in terms of alternative solutions. When such people join Zem business, they do not see the need to acquire a driving license which is mainly granted free of charge after a few days of training, nor do they bother to register with town hall despite being hounded regularly for it. (Key informant – 1)

Similarly, another key informant felt strongly that lack of adequate education hampered the progress of many Zem operators in terms of being innovative as well as not qualifying for some technical basic skills training opportunities. The key informant asserted:

Since the level of education influences the type of job and the level of income, I think that the level of education of Zem operators obviously influences their living conditions and extension their socio-economic well-being. For example, most of them are not qualified to benefit from our entrepreneurship support service. They are essentially limited by their level of education. [...] if we impose a certain level of education, it is precisely because it is important as a basis for being able to properly assimilate the training that we give to the candidates to our technical and financial support. [...] a reasonable level of education not only allows them to develop their vision of the future but also nurtures their ability to implement more effectively what they have learned. (Key informant – 14)

The foregoing discussion brings to the fore that having more intellectual capacity through education may lead to improvement of the Zem operators' socio-economic well-being in terms of not only earnings but also the general outlook of opportunities in life. In support of this view, one of the key informants narrated:

Most of the operators in Zem do not have a high level of education. The majority are semi-literate. However, some graduates are operating in the sector. Operators with a higher level of education do not earn more than others in terms of income. However, Zem operators with a higher level of education seem to know better how to manage their income. Thus, the level of education has some influence on living conditions, as educated people do not work longer than others, as they plan their time better for necessary breaks and rests. (Key informant – 7)

Most of the respondents also linked education to credit access and the socio-economic well-being of Zem operators. One of the key informants emphasized:

Access to credit alone is not enough to improve living standards. You have to know how to make good use of credit, which requires a certain level of ingenuity, initiative, creativity and good management. In the case of Zems, many are not well educated, so access to credit will need to be accompanied by technical guidance and assistance. Only then will a Zem come to understand that one has to think about his old-age, particularly since he would have the financial means to pay for his old-age pension. (Respond10)

It was found that educational background had a significant influence on the ZOSEW. The study findings on the significant effect of educational background on the operators' socio-economic well-being can be linked to the notion that improved educational background in terms of qualifications, skills and competencies are of high importance to individuals which in turn bring about improved business decisions and hence, better SEW.

This study's finding that education possessed by Zem operators had a place regarding their SEW and reconversion was dismissed or never given prominence in some studies. As noted, and emphasized by some key informants, the Zem industry has reached saturation point in Cotonou and a reconversion programme could be one of the viable options. However, an effective and efficient reconversion programme should prioritize the education and skills needs of the recipients. To some extent, this finding corroborates studies that found that formal education was not a major factor in determining earnings in commercial motorcycle transport (Nasong'o, 2015; Zuure & Yiboe, 2017). In concurrence, Yakubu (2012), established that operators with lower education levels earned high daily income compared to those of higher levels. This implied that the level of education did not necessarily determine the performance of the motorbike taxi business.

Nonetheless, other studies have shown a strong relationship between education and skills possessed by motorbike operators and daily earnings and business growth (Rugut & Makori, 2015). Owuor (2018) found that the motorcycle business contributed to the SEW of operators in terms of earnings, health care, family cohesion and family investment. However, this study did not establish the nexus between socio-economic well-being and level of education. The current study used empirical data to establish the influence of education possessed by the Zem operator and socio-economic well-being.

5.5 Influence of Government Business Regulations on Zem operators SEW

The third objective of the study sought to determine the influence of government business regulations on the socio-economic well-being of Zem operators in Cotonou. The study findings in section 4.3.3 above showed that while 39.2 % indicated that they knew that they were required to have a business permit, over 50.0 % of them were not aware. This implied that some of the members might have plunged into the sector oblivious to the operating conditions. Through the permit system, the government was aiming at raising some revenue and keeping track of the number of people in the sector. The study findings also showed that most Zem operators were suspicious and averse to any government regulations even when the regulation was inclined to promote their welfare. One of the ex-Zem operators lamented:

I don't even know if there is a regulation in this country to favour anybody. Everything is about whom do you know. Who sent you to ask for a favour? Regulations are just made to favour rich and big people to the detriment of the poor. There is no regulation in favour of Zems. Still, if there is regulation just tailored to Zems to help them improve their job and their living conditions, they would appreciate it. (Key informant – 11)

It was, therefore, evident that the regulator was not keen on ensuring the operators got the permit before the start of the business. The free rein seemed to be in line with the theory of contestable market which according to Abdelkader and Mansouri (2013) if entry is free and exit is free, production is efficient even if the industry is highly concentrated. Thus, free entry and free exit are necessary conditions for hampering the greed of market monopolists, limiting excessive profits to a minimum in the sense of better serving the interests of consumers.

Having no stringent method of enforcing entry requirements, the only condition to start the Zem business was having a motorbike. It was no wonder that 61.3% of respondents disagreed that the process of starting the Zem activity in Cotonou takes a long time. Similarly,

51.9 % of respondents disagreed that the amount of taxes and fees to be paid annually or monthly is high, while 27.3 % agreed and 20.8 % were undecided. In an actual sense, most Zem operators were conducting their business illegally. Incidentally, although the Cotonou city officials are aware of the sheer number of illegal operators, they claim to have been overwhelmed and prefer a multisectoral approach to a feasible solution. One of the officers narrated:

We are doing our best to clean up this Zem industry as the local government of Cotonou city, but the number of operators has grown rapidly to an uncontrollable size. The illegal operators have invaded the industry in such a huge way that it takes a strong strategy to control it. To clean up this sector, it would be necessary to tackle the heart of the problem, which lies in part in the lack of a decent transport system in Cotonou. Correspondingly, the lack of youth employment, as well as the mismatch between formal and informal education and training and the demands of the labour market, are part of the problem.
(Key informant – 11)

In order to ascertain the Influence of government business regulations on the socio-economic well-being of Zem operators in Cotonou, the researchers tested the hypothesis that business regulation policies by the government have no significant relationship with Zem operators' socio-economic well-being in Cotonou. The study findings in section 4.3.3.1 shows that the hypothesis was rejected ($\beta = -.810$, $t(394) = -10.508$, $p < 0.05$). This implied that business regulations had a statistically significant negative influence on the operators' socio-economic well-being. In other words, the Zem operators' nonadherence to the sub-sector business regulations and government failure to enforce them, resulted in the saturation of operators leading to fewer earnings, fewer savings, an upsurge of health hazards and hence a negative impact on operators' socio-economic well-being.

About reconversion, the restrictive regulations or lack of regulations facilitating entrepreneurship as well as the lack of support to launch their own small businesses limit the opportunities of Zem operators to opt for alternative activities that could allow them to enjoy better living and working conditions. Thus, the stringent regulation and lack of favourable regulation symbolize the negative influence of the business environment in Benin on the SEW of Zem operators in Cotonou.

It was found that business regulations had a statistically significant negative influence on the operators' socio-economic well-being. The findings further imply that increases in formalities and processes were detrimental to the operators' socio-economic well-being.

Increases in the procedures for operational permits discourage the operators and in turn adversely affect their socio-economic well-being. Furthermore, poor entry and competition regulations were detrimental to the operators. In general, stringent business regulations adversely affect the income of the operators and in turn their socio-economic well-being, hence the justification for the negative and significant effect found. Kitching *et al.* (2015) posit that in the economic context, regulations are forms of requirements or restrictions that public authorities or governments impose on companies, and which influence their decision-making process on factors such as production, competition, market entry or exit, and prices. According to the state intervention theory, a legal and regulatory framework is necessary for the existence and functioning of a market, although this framework can in certain circumstances be defined by the market itself, without State intervention. Kitching *et al.* (2015) emphasize that regulations are necessary for job protection, protection of markets from collapse, improvement of the economy, and social well-being by avoiding environmental and human health damage.

It is crucial to highlight, however, that the problem of unrestricted commercial motorcycle transportation in large cities is not limited to the Benin Zem sector. It has been reported also in several other developing countries such as Uganda, Nigeria, Ghana and Kenya (Havugimana, et al 2020). In most cases, the riders plunge into the business without driving licenses, are ignorant or deliberately fail to observe the road safety rules resulting in nasty accidents. In Nigeria, for example, (Yakubu, 2012) notes that urban transportation plans require all commercial motorbikes to be registered under road traffic laws and regulations, including holding a driver's license, roadworthiness certificates, and certificates of good behaviour. Additionally, they must supply their consumers with safety equipment such as reflective vests and helmets. However, a huge number of operators break these norms and regulations without consequence.

In support of the positive effect of regulations in the business world, Kitching *et al.* (2015) assert that regulations not only mandate or prohibit agent behaviour but also support production, exchange and consumption on markets. Nonetheless, Davis and Ward (2008) caution that there are two fundamental theoretical approaches to regulation. On the one hand, the public interest approach advocates government intervention through regulation to correct market failures as tighter regulation should lead to improved quality of products and services, and efficient markets reducing negative externalities and allowing increased competition. On the other hand, the public choice approach sees regulation as enabling the reduction in

competition and a source of increased corruption. Thus, though enforcement of regulations may invite corruption, the greater good of efficient markets might overshadow the former.

In a similar study in Nigeria, Nzeadibe (2021) supports the presence of regulations, arguing that compulsory wearing of identification waistcoats by commercial motorbike users can foster a sense of responsibility. In addition, limiting them to suburban locations and the obligation to use safety equipment such as helmets by riders and passengers can also help to reduce road accidents. Nzeadibe (2021), however, makes a strong case for self-regulation (horizontal interventions), where a group of people apply rules for their own benefit and safety rather than to avoid sanctions from the authorities.

5.6. Influence of Access to Finance Among Zem Operators on their SEW

The fourth objective of the study was to establish the influence of finance access among Zem operators in Cotonou on their socio-economic well-being. As found in section 4.3.4, the majority of Zem operators (63.0 %) agreed that they lack collateral to access the bank loan. Further, over half of Zem operators constituting 52.1 % affirmed that they lack information on the formalities for accessing credit. Similarly, over half of Zem operators (58.3 %) indicated that the repayment interest rate was too high for them. The majority of Zem operators agreed (56.0 %) that they could not cope with the loan repayment terms. Finally, the statement that ‘It is not easy for me to get credit to start another business was affirmed by 50.4 %, however, as high as 33.9 % of Zem operators were not decided. These findings demonstrate the difficulties encountered by Zem operators as they seek capital to improve their investment as well as reconversion. It is, however, noteworthy that providing credit for more people to buy motorbikes, may end up creating a situation where the market is saturated, and earnings drop to unsustainable levels akin to the Cotonou case. The melancholy outlook regarding credit access for Zem operators was perhaps best brought out through the following excerpts from key informants’ interview recordings:

There is no institution today in Benin that wants to grant loans to Zems. It seems that in the past those who got a loan would flee once they got the money. So, Zem is considered dishonest, and they are banned from accessing credit. Anyway, with his yellow outfit, the Zem does not even dare to line up to ask for credit from a bank, the security guard will quickly ask him to kindly withdraw. However, it is very difficult to get by without a loan or other financial support. Because in the face of family situations such as cases of illness, and even for the renewal of a motorcycle, this is

the worst that we can wish on an enemy. Therefore, Zems cannot help but organize themselves into a tontine (savings and credit organization). (Key informant – 1)

There is only one bank in Cotonou according to our information that easily lends money. We call it PACO and this bank is located in Gbedjromèdé. You first need a minimum deposit for three months, after which, you can apply for a loan for the acquisition of equipment, such as a house, motorbike, land, work tools, etc. If you buy land or it's up to them to make the payment to the other party and they keep the official land documents and give you a photocopy. When you have finished repaying your loan you get your original property papers. Then you can still apply for another loan. (Key informant - 5)

There have been attempts by NGOs to grant loans to Zems, but most of the beneficiaries were simply dishonest. The ball is in their court because it is up to them to provide the necessary guarantees and they will have access to loans like all citizens. No one is excluded from access to credit, not even Zems, but it is up to the individual himself who will ensure that the conditions are met. When a passenger does not meet the conditions of payment for transport, do Zems allow this? The same applies to banks which also legal persons are doing business. It would be too easy to say that Zems don't have access to credit. I honestly admit that access to credit is not easy for them. But that doesn't mean they are excluded either. Furthermore, access to credit alone is not enough to improve living standards. You have to know how to make good use of credit, which requires a certain level of ingenuity, initiative, creativity and good management. In the case of Zems, many are not well educated, so access to credit will need to be accompanied by technical guidance and assistance. (Key informant – 15)

The responses from these three key informants clearly show that it is rather difficult for Zem operators to secure credit from most of the banks and financial institutions in Benin. This implies that any operator who suffers a major financial or capital loss has no chance of rejoining the business. However, Zem operators have also been indicated of having been dishonest and reneged on the agreements to repay loans and are difficult to track down. It is also evident that reconversion in which starting capital in terms of equipment as well as special knowledge is required is most likely to be jeopardized by a lack of credit facility. This situation, therefore, calls for a multi-sectoral approach where a serious engagement involving the government, NGOs, multinational organizations, and financial bodies is preferable. This would promote the likelihood of an effective reconversion programme as well as improve the socio-economic well-being of those who continue with the motorbike transport business in Cotonou. Nonetheless,

the urge to get access to credit has brought Zem operators together to form a savings and credit organization (SACCO). Other Zem operators have managed to use their land as collateral, a demonstration of how this business is valued.

It was found that the lack or limited access to credit has a significant negative influence on the operators' socio-economic well-being based on ($\beta = -.920, t(394) = -17.583, p < 0.05$). The lack of access to well-structured, tailored made and feasible financial facilities of Zem operators has impacted negatively their socio-economic well-being. The findings, therefore, imply that higher eligibility requirements adversely influenced the socio-economic well-being of the operators. Similarly, higher degrees of lack of information negatively affected the SEW of the operators. Stringent loan conditions such as high-interest rates and adverse loan reimbursement terms limit their accessibility to finances which in turn hampers the socio-economic well-being of the operators. The finding is contrary to Kores (2017) who found that the offer of flexible loans by motorbike sale companies in terms of the repayment period and amounts has led to the rapid growth of the motorbike industry in Kenya. Further, the office of the president in Kenya enacted credit schemes and released funds for loans for *Boda-boda* associations to purchase as many motorcycles as possible for members to create employment. Similarly, Nyaga and Kariuki (2019) noted that in some instances, people use their land title deeds as collateral while others sell their ancestral land to buy *Boda-boda* in Meru Kenya. The researchers further extolled the crucial use of commercial motorbikes in that by their nature they are affordable and are able to navigate where cars cannot be able. It is out of their availability and convenience that they are used in some places to take children to school as well as patients to hospitals and dispensaries. Among other recommendations, Nyaga and Kariuki (2019) recommended that the County Governments should sensitize and encourage motorcycle riders to join a SACCO in order to make savings for their economic empowerment as well as enrol in the medical scheme to cater for the health of their families. If well managed, the SACCO can act as a feasible starting point for reconversion since the member's savings can act as collateral.

5.7 Zem Operators' Reconversion to Boost their Socioeconomic Well-being?

The fifth objective of the study explored how Zem operators can reconvert to boost their income and well-being (reconversion in the Zem industry). The discussion in this section was guided by the questions posed to Zem operators and key informants that gathered information on several situations that could occasion the need for reconversion. Additionally, the discussion was based on how sustainable economic reconversion could be attained for better economic well-being. This line of argument was in line with the observation of Fontan and Klein (2003) that economic reconversion is imposed by necessity and conditioned by economic imperatives. In support, Masdonati *et al.* (2017) emphasize the need for vocational reconversion, which is a response strategy to the precariousness of employment in the informal sector, through vocational training and education, to empower the youth with skills, creativity, and innovation that they need for job seeking, or career change.

5.7.1 Most reconversion-oriented socio-economic groups

The analysis of the willingness to reconvert considering the different socio-economic categories most favouring reconversion provided insight into specific socio-characteristics to be taken into account in a possible reconversion process in the Zem industry in Cotonou. From this perspective, the study findings revealed that Zem operators of the working age of 25 to 45 years old were the ones who most expressed their intention to quit the Zem sector. More than half of them, even younger, in the 25-35 age group, were more active in their intention to reconvert. Age is determinant in the intention to reconvert, although research on a study on career in later life, showing that there is no age limit for chartering (Johnson, 2009).

Experience in the trade also influences the desire to retrain, since operators with little experience in the trade (less than ten years) are the most active in wanting to retrain, whereas the temporary nature of employment (Djossou, 2017) is determined in the workers' willingness to change. Regarding educational background, the findings are consistent with the conclusion of Adams (2013), who argued that education contributes to better socio-economic well-being through the type of job it offers. Family responsibilities such as Zem operators' dependency in Cotonou are one of the motives underlying workers' occupational reconversion (Stephanie, 2016). This is also confirmed by the study's findings on the socio-economic characteristics and satisfaction of tenants in public housing in Lagos, Nigeria (Jiboye, 2014).

Zem Operators with low monthly income (less than or equal to \$50) feel economic issues as one constraint pushing them willing to reconvert. This confirms the findings of Michanova (2008), Fournier et al (2017), and Masdonati (2017). In this sense, the economic motives behind the reconversion of Zem operators in Cotonou are strongly highlighted in this research as supported by the other research cited in this context. As such, without necessarily contradicting them, the results of this study do, however, nuance the findings of some researchers who have considered other reasons behind reconversion than the widely held assumption that people often change occupations in order to access better-paid jobs job (Johnson *et al.*, 2009).

Regarding the locality of growth, the willingness to reconvert is higher among operators who grew up in urban localities (56.6%) compared to those who grew up in rural localities (43.4%). There is a discomfort of urban lifestyles about certain jobs, including Zem activity, and this is consistent with the findings of (Järvinen, 2020) on the influence of localities on life trajectories.

5.7.2 Reasons underlining the reconversion

The analysis of operators' profiles and their willingness to reconvert to activities show that age influences the choice of operators. Operators in the age group of 25 to 45 years, which is the working age, show more interest in reconversion. Older operators have spent relatively more time in this profession and would have acquired some experience in this profession compared to younger ones and would no longer be able to adapt to other new jobs. These results are confirmed by those of Jonhson et al. (2009), who attest that most changes in occupation occur among younger workers, as occupational changes pose a greater challenge for older workers. The findings of this study also show that the symbolism of Zem as a temporary job influences operators' willingness to reconvert.

The analysis reveals both the presence of ZOs who expressed their desire to quit the Zem economic activity and those who are content to continue operating in the sector, testifying thus, of a voluntary decision in the matter of reconversion. This finding aligns with previous studies about the voluntary nature of reconversion (Michonova, 2008; Berton, 2013; Denave, 2015; Garthe, 2021). Still, there are some nuances in the literature about the idea of reconversion based on willpower or voluntariness. Actually, in the case of ZOs, reconversion is not really voluntary, which tends to confirm Fournier et al (2017).

However, whether the reconversion is voluntary or involuntary, the results of the objective five analysis show that there are a variety of reasons underlying ZOs' desires to opt for or against reconversion. This finding backs up the findings of Masdonati et al (2017). Rather than a single or isolated reason for changing jobs, many decisions are motivated by a combination of factors ranging from individuals' inner aspirations to contexts and working conditions, including socioeconomic factors.

As results findings of this study suggest that health concerns are the underlying reasons for the willingness to quit Zem activity. Some operators mentioned back pain, and respiratory diseases, among others, as reasons for wanting to leave the Zem industry. This supports the findings of the study conducted on the occupational risks among motorbike transport operators in Cotonou by Lewin et al. (2018). In contrast to Masdonati (2017) who reported that health issues were not frequently mentioned as reasons for reconversion in some research, this study asserts that health issues are the second most important predictor of Zem Operators' willingness to reconvert.

The reasons for the match between training and employment as part of this study's findings were also mentioned in the research of (Denave, 2015, Masdonati, 2017) as part of job dissatisfaction. However, the general dissatisfaction in Zem operations is related to operators' perceptions of lifestyle, interests, and values. In this vein, harmony between work and family life appeared in a lesser proportion, yet crucial in the context of social well-being, which is one of the objectives of this study. Indeed, operators who have little socialization with their children or with their friends, or who often cannot participate in cultural festivals in their villages, or go to the funerals of their relatives, justify their desire to change jobs by these constraints of work-life unbalanced. This other type of motive for reconversion is confirmed by the literature (Stephani, 2016; Järvinen, 2020; Garthe *et al.*, 2021).

The specificity of the findings on the desire to reconvert in relation to Zem operators' concerns lies in the fact that the operators essentially expressed their aspirations for trades or more attractive jobs in terms of income and working conditions. Thus, the influence of income on intentions to reconvert is predominant in the results of these studies. In a world where money has become the measure of everything, as it is in Cotonou, income has become essential to afford better living conditions and avoid the risk of getting bogged down in extreme poverty. However, due to low incomes, most operators are unable to save money.

Thus, the reasons for dissatisfaction related to socio-economic aspects are essentially key in the decision of operators who have expressed their desire to reconvert. Indeed considering economic factors, it emerges from the study results that the majority of Zems (84.6%) who have expressed their desire to leave the Zem industry for other alternative activities are all eager to access an economically stable activity or employment. This attests to the difficulties young people encounter in Benin to integrate sustainably into the labour market. This is in line with the research by Blustein *et al.*, (2016), who consider the difficulties faced by young people to integrate sustainably into the labour market as a more generalized phenomenon.

5.7.3 Attitudes towards reconversion strategy

Whatever the underlying reasons and motives for reconversion or occupation change, the results of the study show in the case of Zems that 84.56% of operators clearly expressed their willingness to reconvert to alternative activities. At the same time, 15.44% of the operators surveyed also clearly demonstrated their willingness to remain in the sector and continue their activity of Zem operation. These results consolidate the fact that reconversion is, first and foremost, based on the willingness of individuals, as emphasized by Stephanie (2016), arguing that the individual plays a central role in his career choices and career change. Otherwise, it could go wrong, as evidenced by respondents' responses to the simulated question on reducing and limiting the number of operators in the sector. Invited to anticipate in search for an alternative income-generating activity in the event of downsizing measures, some operators have instead threatened to stage unrest in the city if such a decision was implemented.

As such, a respondent gave his opinion about a reduction of the number of people who shall operate Zem in the industry in Cotonou:

Is it just a joke, or does the government send you to sound out our opinions? In any case, If such a decision is made, we who live from this activity know how to speak with one voice to claim our rights. Tell them that before they make such a decision, they should think about the consequences. (Respondent - 335)

Another one emphasized:

If the government takes such a decision without any accompanying measures, they know what trouble this country will face until they find a more just solution. (Respondent - 27)

Similarly, about 20 years ago, a cassava project of the government of President Kerekou, for Zem operators' reconversion, ran up against the inadmissibility of the operators. They ended up with demonstrations, testifying thus to their non-adherence to this reconversion project. Riding a motorbike back then was juicy and seemed easier than cultivating the land. This illustrates that reconversion should be the outcome of a voluntary decision, well-conducted and even supported as far as possible. This is consistent with the study on the agriculture peasants' reconversion by Kay (1997) and the study on the reasons behind career change (Madonati *et al.*, 2017). These findings also match the interpretation of the results of a survey carried out by Fournier *et al.* (2017) on the career change process in the lives of a group of workers in Canada. The voluntariness of reconversion in this study confirms similar findings and interpretations in the research conducted by Stephani (2016) on occupational change among women in Belgium, and Garthe *et al* (2021), on changes of profession in later age.

Furthermore, although the individual is at the core of their career choices and professional reconversion, the study results also unveil two types of attitudes exhibited by individuals faced with reconversion, whether voluntary or involuntary. With this regard, the imaginary threat of the decision to reduce and limit the number of Zems in Cotonou was included in the questionnaires so that Zems could express their anticipation on how they would fend for themselves to avoid falling into unemployment. The responses to this situation describe the type of attitudes individuals would manifest when faced with a decision to reconvert.

The various answers from the Zem operators surveyed highlight a proactive attitude of some of the operators, whilst others show a reactive or passive attitude towards the decisions and the process of reconversion. Unveiling his proactive attitude to reconversion, a respondent stated this:

Such a political decision would be welcome. Zem has no future and will not last much longer in the current state of the political authorities care about the people who voted for them. I am ready to go and invest in my other business of breeding and selling manure. (Respondent - 86)

Another respondent stated that

It [this question] is relevant and will help us to reflect as members of the board of the Zems syndicate on how to prepare our colleagues to anticipate such a very likely decision. I have no problem with such a decision because my grain business is doing well. Anyway, I have already stopped operating Zem following my accident (Key informant – 6)

As for reactive or passive attitude towards reconversion strategy, this operator just relies on God:

God never abandons his servants. Every problem has its own solution, in time and place. Let's wait to see this situation happen and we will see what solution to adapt to it. (Respond -36)

Although the decision to reconvert was apparent in the minds of operators willing to reconvert, there are still some, no matter proactive, who continue exhibiting hesitation about leaving or continuing Zem activity. This is the case of an operator who did not know what is holding him back, although proactive in his desire to reconvert:

I was since prepared to leave, but I do not know what is holding me back (Respond – 31)

This other Zem operators want to quit but is not sure whether there will be better opportunity outside there.

I definitely want to get out of this murderous business. The problem is what else I can do to satisfy my needs and those of my family. (Respondent – 158)

These proactive and reactive attitudes of Zem operators who manifested their desires to reconvert or keep operating Zem activity are notably highlighted in the results of Masdonati *et al.*, (2017) and Fournier (2017). Hesitation is another attitude highlighted in the results of this study and supported by the results of a survey conducted by Treuren (2013) on "the relationship between perceived job alternatives, employee attitudes and leaving intention". This voluntary but hesitant intention to quit the Zem operation activity and reconvert to alternative occupations is characteristic of “reluctant quitters” as opposed to “enthusiastic quitters” who engage in reconversion without hesitation. The existence of these two categories of reconversion intention has been mentioned and explained explicitly in the work of Hom *et al.*, (2012), who argued that an employee could behave in several states of Proxima withdrawal such as being an enthusiastic leaver or a reluctant pursuer of the same activity.

5.7.4 Voluntariness and involuntariness of the reconversion

The results of this study pose a real challenge in that it is not easy to draw a straight line between voluntary and involuntary reconversion. Looking at the results, one can realize that the proportion of 15.4%, representing operators who said they would not leave Zem operation even if they had the opportunity to do so, is still noteworthy. These operators may have a sense of stability in their income-generating activities. Indeed, satisfaction with the context and working

conditions may ensure stability in their lives and work, as these operators feel that they control the course of their professional lives according to their aspirations. This is consistent with the findings of Michonova (2008), Hoareau (2014), and Stephani (2016). Many other reasons underlie the motivations of some Zem to oppose retraining. So, for some, Zem activity is just a hobby. Others do not expect much from this activity other than the daily gain to afford a bottle of beer after work in the evening, in the case of officials who temporarily operate in the area. Some of them are content with the daily income as long as it balances their gasoline expenses to get to work. Though, among other reasons for their unwillingness to retrain, some cited reasons of advanced age and lack of skills and qualifications, including adopting a rational choice strategy. These attempts at arbitration based on various reasons align well with economic theory. Workers make decisions about their choice of occupation among available alternatives based on their preferences, abilities, skills, and expected earnings (Djossou, 2017).

Eventually, intentions to exit the Zem business industry relate to the challenges posed by the increasing number of new market entrants and resulting fierce competition, declining profits, and increasing risks of the accident given the narrowness of the bike paths. To all this must be added the risks related to back pain due to long hours of operation in the hope of achieving the objective of the day, the respiratory diseases caused by the heavy air pollution in Cotonou due to gases emitted by motor vehicles, the rivalry of other means of transport including yellow taxis initiated by the government in 2017, and the upcoming urban bus transport system project. These are all parameters that reflect the highly precarious nature of the working conditions in a sector in decline, testifying to the lack of momentum of the Zem economic model. This results, on the part of the operators, a fragile feeling of control of the events. Indeed, this situation makes it more and more difficult for them to project themselves into this profession in the long term.

With these considerations, one can realize that reconversion goes beyond the simple fact of willingness. This aligns well with Michonova (2008) findings in a study of occupational retraining strategies and modalities of adaptation to socio-economic change. The author underlines the force characteristic of occupational reconversion driven by existential necessity, including labour market exclusion and the effects of economic constraints. Thus, the reconversion of Zem operators is part of the necessity and imperative to get them out of precariousness. This imperative nature of retraining is echoed and confirmed in the literature, which states that retraining is due to necessity and imposed by economic imperatives (Fontan and Klein, 2003).

This observation is also consistent with the results of the study conducted by Berton describing workers' reconversion as involuntary because it is related to external motivations most often associated with labour market instability (Berton, 2013). In addition, the vast majority of Zem operators surveyed testified to their strong attachment to this occupation, which they would not like to quit. As such, reconversion would not have been considered without the continual difficulties encountered in the Zem labour market or without the unpredicted shock. This study confirms a similar dynamic in the work of Fournier and his colleagues, who associate the reconversion of workers with precipitating events and difficulties encountered in the labour market. (Fournier et al., 2017).

In addition to the market declining, the aggravation of risks and negative externalities associated with Zem occupation is also the stigma and labelling. There is also the perpetual harassment from municipal authorities, which are primarily responsible for the need for occupation change on the part of operators, some proactively, while others rather reactively.

The harassment of the authorities behind the will of certain operators to leave the sector became more virulent when the public spaces of Cotonou became rooms for these operators. Therefore, a public authority of the Littoral (Cotonou) raised his voice:

We have been given notice that some of our fellow citizens emigrate from the villages and towns on the outskirts of Cotonou to carry out Zem business without taking care to provide themselves with decent accommodation for their night rest. Thus, the latter prefer to sleep under the stars in the public spaces of the Littoral Department, suggesting an environment of insecurity and organized crime in the city. From now on, the police will take strong measures against any Zem operator caught sleeping in public spaces at night, starting from January 23, 2017...". (Ribouis, 20 Jan. 2017)

Ultimately, determining whether the potential reconversion of ZOs in Cotonou is voluntary or involuntary is not an easy task. It is not a simple decision, either on the part of the operators or of the Beninese government. On the operator side, there are a variety of compelling reasons for reconverting. On the public side, there is also a constraint in Benin's commitment to implementing the SDGs, particularly the promotion of the well-being of all, and leaving no one behind. On this basis, it is worth considering how Zem operators can reconvert and how the Zem industry in Cotonou can be decongested. Would the mere desire to reconvert be enough to implement successfully the reconversion in the Zem industry in Cotonou? These concerns guide the final section of this discussion of objective 5, which is about how operators can reconvert to improve their SEW.

5.7.5 Ways to reconvert and improve Social and Economic Well-being

The issue of reconversion in the Zem industry recalls the restructuring strategies in industries or companies with declining performance issues. According to the results of this study, market concentration is considerably reduced in the Zem industry in Cotonou. The operators interviewed as well as the key informants and experts interviewed, associated this mainly with the ease of entry into the industry, which manifests itself in the entry of an increasing number of operators into the industry. This confirms the findings of Djossou (2017) and Lawin (2018), who estimated the number of new entrants in the Zem industry in Cotonou at 10,610 on average per year. As a result, as competition intensifies, operators' revenues are expected to decline as found in Karuna *et al.* (2012), hence the overall business model of Zem operation slows down.

These results also confirm those of Brion (2012), who found that Zem's economic model in Cotonou was increasingly running out of steam over time. How to reverse this trend and restore the economic vocation of profitability to the Zem company in Cotonou?

Key informants from the Zem community, retrained or retired, and the experts interviewed suggested that the sector could be decongested to allow a reasonable number of operators to obtain more customers and enjoy an improved level of income. Indeed, restricting entry into the Zem industry will directly affect loosening competition, as there is sometimes a limited number of customers, particularly outside peak hours. This is in line with the study results on the limits of competition in urban bus services carried out by Gómez-Lobo (2007). They argued that the entry restriction displayed an ability to relax competition among bus service providers in Bogota, Colombia. The idea of downsizing the industry might be associated with the general restructuring of the industry which may be more complex as stipulated by an expert relying on the theory:

When a market operates as a contestable market with incomes down to such an extent that pure economic profit tends to zero, the theory goes that if you want to create a profit in that market, you have to limit the number of entrants into the market. In the case of Zem operators, people need to understand that they can no longer just get a motorbike and jump into the market and operate at will ... (Key informant – 13)

With the Zem industry overloaded and the business model appearing to be running out of steam, the theoretical guidance provided by this key informant can be understood as a call for the downsizing option. This strategy could limit the number of operators in order to achieve the goal of improving the welfare of operators in various aspects, including a better income that

allows them to afford health insurance and contribute to their old-age pensions. Assuming the Zem industry operates partially as a contestable market, i.e., there are zero entry costs and zero sunk costs, illegal operators can still operate a hit-and-run strategy since there are low barriers to entry. They would make profits and then run, given there are no or low exit costs. But the contestability theory of industrial markets also embodies an essential dimension of regulating competition in markets. For example, it suggests that opening the market to new entry is likely to encourage efficiency and deter anticompetitive behaviour. This is in line with the approach presented by Kaunyangi (2014), who argued that opening up the mobile communication market in Kenya to other companies will result in lower communication prices and improved service.

Alternatively, standing on the supplier side, in the present case, the Zem operators in Cotonou, the theory suggests raising the level of barriers to entry into the market. This would reduce competition and raise the price level of trips to the benefit of the Zem operators.

A restructuring strategy is therefore necessary. However, it will be essential to design a structure for this industry to meet the desired objectives. The mechanism design process inspired by Eric Maskin (Colliard, 2017) suggests that even when a structure can generate expected results, there is always an alternative more efficient structure capable of generating these results better. This mechanism, operating as a reversing economic process, suggests setting the desirable outcomes and working backwards to figure out the structure capable of generating those outcomes.

However, downsizing in the Zem market in Cotonou could leave operators who would no longer be able to cope with the new industry entry requirements, i.e., those who will not be able to cross the barrier imposed by Benin's competition authorities. Therefore, in order to make retraining everyone's business for better living and working conditions, key informants consisting of former Zems and members of Zems' unions were approached. Almost all of them stressed the issue of job opportunities. They clarified that alternative jobs would encourage Zems to retrain and leave the sector. However, the issue of alternative jobs, or jobs at all, is a critical issue that the ruling government of the 2021-2026 mandate has included in its development agenda.

Beyond an alternative income-generating job, the social and psychological dimension of the job does not leave the operators of Zems indifferent. Nowadays, it is generally accepted that employment has broader importance beyond the income it provides. This is reflected in this study as well as in previous studies by Fournier et al. (2017), Stephanie (2016), Johnson

(2009), Masdonati et al. (2017), and others, that employment, according to the people surveyed in these different studies, can convey identity, status, self-confidence, and self-realization. The results of this study confirm the findings of these various researchers that employment contributes to an individual's overall life satisfaction in terms of well-being. Thus, this study identified the reasons for working conditions, safety and security related to work, interests, values, identity, and the adequacy between job, qualification, and skills, as determinants in the decision of Zem operators for reconversion. These reasons are also found jumbled up in previous studies, including the work of Masdonati *et al.*, (2017). As alternative jobs are necessary for the reconversion of operators, it is essential to identify and locate these jobs and the skills, qualifications, and competencies they require.

In most African countries, including Benin, the labour market is made of a dualistic structure whereby there is a formal sector on the one hand and the informal labour market sector on the other hand. With this regard, the dual theory of labour market as viewed by Todaro and Harris, considers the informal labour market as precarious and vulnerable with low and unstable incomes and a sector where excluded job seekers recourse thanks to no or low barriers to entry. On the contrary, the formal labour market sector is better featured with relatively higher and more stable incomes, but the entry is more stringent due to qualifications and skills requirements. However, not all individuals with educational qualifications and skills looking for better-off jobs would be employed in the formal sector, as the demand for employment is low and employment opportunities are limited (Djossou, 2017).

Therefore, the rationalized surplus of labour in the formal sector joins the informal sector, which in Benin employs 95% of the labour force (WB, 2019). In fact, due to the relatively free entry, Benin's informal labour market sector continually hosts people seeking a living no matter stable or not as long as it provides daily food and keeps from unemployment. Zem industry being the most accessible cash income activity, all the profiles or socio-backgrounds are found in Zem industry. As such Zem sector hosts multiple backgrounds to be considered in the reconversion process as suggested by key informants in the sector of employment, saying:

we must identify the different profiles operating in the sector to address their specific needs. (Key informant – 14)

Paradoxically, a town hall official defending their noble urban transport bus project advocated the law of the market, but in reality, he seemed to insinuate the force of power. He was interviewed about the future of the thousands of people who make a living from the Zem

activity in Cotonou, an activity which, in the background, seemed to be condemned then to be banned from the urban transport landscape in order to ensure the viability of the looming bus project. In fact, the town hall official already had his answer as to the future of Zems, because without hesitation, he declared: "...the Zem operators must return to agriculture." (Rodriguez & Nouwligbeto, 14 Oct. 2010).

Nevertheless, mentalities and reflections have already made better progress. A collective action constructed from below and from within the community of Zem operators would give better results than a reconversion decision imagined or even well-designed from above in a top-down decision for the benefit of Zem operators. (Melkote & Steeves, 2021). This is in line with the opinion transcribed below from a key informant, which precisely contradicts the strategy of the city Hall official presented above. This key informant suggests:

We must discuss with the Zems, or at least with their unions, to identify the different centres of interest of the operators to list the activities that each one is capable of embracing. Then, discuss with the municipal authorities to design a program tailored for the various sectors' various backgrounds. This would be a good starting point in the process of reconversion to improve their living conditions. Above all, we must avoid retraining them without them, i.e., not imposing on them reconversion designed and skydived from the air-conditioned office of decision-makers. (Key informant – 14)

Classifying the various socio-economic backgrounds operating in the sector to tailor for each group a reconversion programme is consistent with the study on reconversion in the agriculture sector (Kay, 1997). In this regard, building on the experience from Latin America, Chile has become a model for many countries. Its achievements have indeed been remarkable in reconversion in the agriculture sector. Identification and classification of the beneficiaries were one of the pillars underpinning the process. The reconversion was first aimed at all peasants. However, a unique feature was given to the areas with difficulty meeting the competition pressure challenge, which was impeding many farmers to survive. Then the reconversion programme was tailored for those whose income was mainly derived from agriculture and animal on the farm, providing them with a minimum annual income. In short, a vital distinction was made between viable, potentially viable, and non-viable whose agricultural productive potential was little to be viable (as agricultural producers) and who were concerned with reconversion out of farming.

5.7.6 Alternative activities for reconversion

When operators willing to reconvert were asked about the alternative jobs which they would be able to embrace, 81 operators mentioned small business (81), 129 mentioned agriculture and husbandry (129), 57 mentioned handicrafts (57), 16 mentioned activities in the catering sector, and 23 mentioned income-generating activities classified by the researcher into “others”, and 28 were still undecided about the activity they intend to reconvert to.

Small business for reconversion

Small businesses ranked second among the priorities mentioned as alternatives for reconversion. This consists of food products, second-hand clothes, second-hand motorbikes, tires, adulterated fuel sales, drinking water, etc. Such activity is common in the informal sector in Benin. Such activity is common in the informal sector in Benin. Small businesses occupy the majority of the population and provide daily livings. In most cases, a small business is to have at least employment for someone looking for small funds to start his own small business, as a family member from the village.

Since my wife runs her own little shop, I had to employ a niece and another girl looking for money to collect her hairdressing apprenticeship certificate and open her workshop. I also employed a nephew and another young man in my board shop because lifting boards alone is not easy. Thus, we were three of us when I did not go to the Nigerian border to buy adulterated gasoline for resale, or to the forest for plank production. (Key informant – 1)

Many people in Benin learn to fend for themselves as the government could not provide for them. This started with the 1980s' economic and financial crisis, followed by the better therapy of the Structural Adjustment Programme. Mainly people involved in small businesses, became part of the living mode in Benin with no gender discrimination. This is the line with the literature, whereas self-employment and entrepreneurship were seen as inciting career options (Kew et al., 2015). In this context, young people mainly play a role as agents of transformation through the job they create and corollary through solving social problems. In this vein, Schott et al. (2015) emphasized that youth are much more prone to creating new businesses. Praising the commitment of the youth Benin engaging in business considered as a high potential sector, Professor Allistaire Alinsato, the Cabinet Director of the Minister of State, Planning and Development, declares that "the involvement of young people in entrepreneurship

is a source of economic growth and job financing, which in turn help reduce unemployment" (Assankpon, 8 Oct. 2021).

As a matter of fact, regarding economic development, the current Benin Government highlights three main challenges to overcome in its Action Plan, named improving food security, livelihoods, and access to entrepreneurship. However, the youth's access to employment remains a real problem in Benin as well as the issue of underemployment, including decent employment, which remains a significant concern for public decision-makers. Promoting entrepreneurship remains a relevant solution to be explored in depth since it is considered a key driver of economic development and poverty reduction.

Agriculture for reconversion

Interest in agriculture is manifested in the results of this study as the majority of the operators willing to reconvert pointed to agriculture as the sector, they will engage in. This is in line with the study of Resnick and Thurlow (2015) who reported that more than 60% of Africans continue to live in rural area where the majority are engaged to some extent with agriculture. As shown by the statistical results of this study, agriculture is at the forefront of the choice of activities for the reconversion of Zem operators. Out of 334 operators who expressed their willingness to reconversion, 129 declared their interest in the agricultural activity as an alternative to engage in, if given the opportunity. In this sense, Christiansen and his co-authors confirmed the evidence for the ability of agriculture to act as an engine of economic growth and strong poverty reduction in association with the growth of the smallholder sector (Christiansen *et al.*, 2013).

The apparent increase in interest from various investors in African agriculture suggests that there are indeed opportunities. The apparent increase in the interest of various investors in African agriculture would indicate that there are indeed opportunities. Companies and individuals believe more and more that there are opportunities in this sector. The Agenda 2030 believes in the immense potential of agriculture, positioning it at the centre of sustainable development projects. Indeed, the SDGs aim to shape national development plans, from ending poverty and hunger to responding to climate change and preserving natural resources, with food and agriculture being at the core of this programme. Regarding the economic and food security

implications of the Covid-19 pandemic, UNSDG (2020) targeted agriculture alongside the health sectors, to combat the shocks due to the Covid-19 pandemic. As such, outlining the potential impact of COVID-19 on the world's poorest people, the United Nations SDGs (Goal 2) have emphasized measures to support the ability of smallholder farmers to increase food production in light of the effects of the pandemic on the food and agriculture sector (UNSDG, April - December 2020).

On the other hand, most households operate their farms, often averaging less than 5 hectares, which suggests a relative existence of enough opportunities for Zem operators to find their share in the agricultural sector. In contrast, relatively few people are employed as agrarian wage earners. Supporting smallholders' growth could improve wage opportunities in the agricultural sector. There is no surprise in many Zem operators mention agrarian activities for their reconversion. In fact, all agricultural activities are practised in Cotonou, being vegetal, animal, halieutic, or agricultural transformation. Marketing gardening is more practised in Cotonou. The demand is very high as stated by this key informant, a former Zem operator, reconverted in marketing garden:

...tomato, carrot, and other vegetables are imported from Burkina Faso. (Respond – 3)

This testifies to the limited production capacities and challenges faced by producers. Market gardening faces a land challenge in Cotonou, thus limiting farms, and consequently, the quantities produced. However, given that the products imported from Burkina Faso have not been produced in Cotonou, there is a way to shift the market gardening industry outside of the city of Cotonou and find a solution for the delivery infrastructure. The report also took up the challenges of mainly manual watering, which raises the need for improved watering through irrigation technology. Lowering the barrier to access to financing is also extremely important to help producers increase their production. Unfortunately, the terms and conditions of payment set by financial institutions are beyond the reach of these poor citizens.

Livestock production in agriculture is deficient and poorly organized in Benin. It is essentially made up of poultry, local pigs, and small ruminants. Due to high urbanization, few people invest in animal production considered a secondary activity, as confirmed by the 2018 Cotonou development plan project. The same draft city development plan also emphasizes that animal production is far from meeting local demand (Commune de Cotonou, 2018).

In addition, respondents also mentioned the breeding of guinea fowl, ducks, large ruminants, and agouti, whose meat is highly prized in this region of West Africa but a species

currently endangered. Some operators also mention dairy cows, the demand for milk and dairy products being very high, but Benin is looking outside to satisfy part of this demand. This implies that animal production presents an opportunity for operators wishing to reconvert, with almost all of the operators surveyed having mentioned breeding for their Reconversion.

Regarding agricultural transformation, fruit processing, particularly pineapple produced in large quantities in Benin, but orange, papaw, and lemon, to name a few, were relatively mentioned. Benin and neighbouring countries' market is flooded with fruit juices imported from China, Arab countries, and elsewhere. The processing of palm oil, of which Benin is one of the major producers in Africa, was also mentioned. As such processing sector is still at an almost virgin stage and only requires political will and investment to make it a sector with a solid contribution to employment and economic growth.

Regarding fishing, Benin is blessed with Lake Nokoue in Cotonou and other lakes in the southern region and the vast Atlantic Ocean. In addition, Cotonou and its surroundings have a few aquacultures, fish farms, and fishponds. Although a certain number of operators mentioned fishing as an alternative income activity they would consider for reconversion, the reality remains the number of fishing operators is decreasing in Benin (Commune de Cotonou (2018)). The lack of equipment, structures, and technology for the conservation of fishery products may be the reason. Water pollution, and relatively difficult access to inputs, are other challenges. However, the fish market is up-and-coming, so local production cannot meet demand. Thus, Benin imports frozen products, including fish, chickens, and others. Given that the activities of supplying these needs are of interest to Zem operators, support measures for developing this sector of activity could make it a sector able to accommodate operators with the willingness for reconversion.

Artisanat for reconversion

Many works in the crafts sector, which include sewing, carving, mechanics, carpentry, etc. It is a satisfactory sector for some artisans who evolve in this sector. It is the case of a tailor and former Zem operator, who considers himself happy to do a much cushier job than riding a motorbike taxi. The crafts sector still holds many job opportunities. However, to make this sector competitive for Zem operators' reconversion, there still needs some improvements at many levels. It is vital to develop policies and measures to protect local production with a view to the development of economic operators in the crafts sector. Financial support through

microcredit is the most urgent recourse for some craftsmen, especially since access is almost impossible in the current state of things. This is consistent with the opinion in the report from Commune de Cotonou (2018).

Other jobs and activities

Zem operators evoked various other jobs including taxi, private or administrative cars, truck Driving, Security guard, Teaching, Marabout, Banking, Computer engineering, Intermediation in real estate, Office Secretary, Cartography in urbanism, Research in Traditional Medicine to prevent and to cure diseases like Covid-19, etc. Some of these alternative jobs could be mentioned by operators with specific qualifications and skills since the results of the socio-economic background analysis of the population under study provide information on the presence, among others, of university graduates in the Zem industry in Cotonou. With this regard, the reconversion strategy could consider that, as some alternative activities or jobs would be mentioned concerning the level of education and training.

In the same way, the locality where operators grew up matters in the process of reconversion, as people who grew up in rural areas would be more likely keen to engage in agricultural work while graduates and people who grew up in urban areas would be more reluctant to the demands characteristic of certain agricultural activities. This is confirmed in the literature. Thus, although the life courses of operators could be individualized in many aspects, often the location of individuals within socio-economic structures strongly affects their chances in life and, therefore, the formation of their life courses. They were evidenced by the situation of operators who immigrated from rural areas to operate in Cotonou and some who have no shelter to sleep in except public spaces (Ribouis, 20 Jan. 2017). The impact of social origin on aspirations in terms of opportunity for retraining can be seen in the difference between the types of jobs targeted by operators with a level of education and training and the other operators, just as between operators who grew up in rural areas and those who grew up in urban areas.

This influence of social origin and the life course about the alternatives for reconversion is consistent with the work of Järvinen (2020) on the social background and labour market careers of young people. Thus, the historical, socio-economic, and institutional conditions, including the labour market, example, have a different influence on the life course of individuals. Brüderl et al. (2019) emphasized the socio-historical, structural, and institutional contexts that mark people's lives in society. Practically, individuals from lower social strata may suffer from unemployment and enjoy poor SEW as they may not be creative enough to

find alternative sources of income compared to people from higher social backgrounds and more educated people as this is consistent with the work of Brüderl and colleagues on an analysis of the reproduction of social inequality (Brüderl *et al.*, 2019).

It should, however, be stressed that social origin has no predestination effect on the life course of individuals. These trajectories are often made up of transition phases, constructed according to changes in the political, social and economic environment. These changes and adjustments in the life course of individuals are observed, for example, when the Welfare State automatically provided employment, which had the effect of a visible positive change in the life course, even of people who were a priori disadvantaged. Hence, there would always be room for the betterment of every citizen's life in some way, based on fairness and equity.

5.7.7 Ways to Improve Zem Operators' socioeconomic well-being

Health care

Considering the specific needs that could contribute to the improvement of their SEW, the majority of Zem operators suggested as a priority financial accessibility to health insurance and access to contribution for their old age. Incidentally, when interviewed on which of the elements selected in this study to assess SEW was more important and sustainable, almost all mentioned health as a key factor in sustainable socioeconomic well-being:

Lasting good health gives you more hope in life. Although money promotes health at least at the psychological level, health remains central to sustainable social and economic well-being. (Key informant – 7)

Concerning social protection, as banal as it may seem, it is from work, from employment, that comes the nation's economic growth. Employment creates contributions, which in turn creates social security. This may seem a bit of an oversimplification, but this logic could be deepened by examining the case of the Zem operators under study in this research since they are considered part of the weak social layers given their underemployment and low income.

Although this study did not examine the financing of social security, study still looked at the sources of government support for vulnerable groups. Thus, it should be noted that workers, including the underemployed, contribute to the government budget via taxes they pay. To be less simplistic, therefore, we could argue the Employment-contribution-social protection logic by mentioning the dimension of fiscality, in the sense that employment generates taxes.

In turn, taxes generate social security. Therefore, the enjoyment of social benefits is generally associated with the exercise of professional activity, hence an assumption of a direct relationship between social security, especially the Zem operators' old-age pension, and the labour market (Damon, 2016). In this perspective, to benefit from old-age pensions, Zem operators do not expect to be considered social cases but as worthy able citizens who would like to contribute more to the economic development of their country. Moreover, this can be done through decent jobs allowing them to earn their lives and safeguard their old age through the logical process that generates funds for social protection.

Moreover, it can be assumed that there is a positive link, in all respects, between employment and social benefits. The literature is not lacking in arguments in this regard. Social benefits, especially health insurance, have a positive effect on the presence and attendance of workers, which in turn has a positive impact on productivity. This confirms the ideas developed by Damon (2016) also. In any case, the legitimate expectations of Zem operators regarding social benefits could be met through the Government's Action Program, which plans to make registration for health insurance compulsory as of January 2022. The health of all citizens is a public health priority, and human capital security. This is one of the concerns of the government of Benin, as the current Minister of Health so aptly stated at the time of closing this section of this research, December 2021:

"... the government with the support of the assembly that voted it had to make health insurance mandatory from 1 January 2022, ... government employees, private sector employees, retirees, the informal sector, everyone will be required to have this compulsory health insurance to cover the basic basket".

AB (2021 Nov. 29)

The interest of the Government of Benin in improving social benefits confirms the positive link between social security and employment, in that employment, is enhanced and strengthened by social security guarantees. Hence, the causal link between social benefits and the maintenance and improvement of human capital and economic growth. One of the main results of the development of social security is, in a socio-demographic context, for example, the sharp decline in extreme poverty in the world. However, this must be put into perspective, given the different patterns of economic growth that affect social security programs in different economies (Damon, 2016). Adequate access for all remains the enemy to fight in Benin. To this end, the participants in this study pointed to the need to raise awareness among the population and to the cost of health insurance which this Zem operator particularly echoed:

Health insurance is good, but it is not free. We must pay for it among my of other expenses that we have to meet daily, yet Zem activity is no longer profitable. (Key informant– 4)

Another concern, although not raised by the participants in this study, which nevertheless seems essential, concerns the basket of illnesses covered by this compulsory health insurance. On the airwaves of the influential Radio France International (RFI), a general practitioner, Dr Samuel Guido, said that the health insurance card allows the holder to benefit from free health care for several pathologies. However, he was quick to point out that:

"This is the case for the most common infections, such as malaria, respiratory, and gastrointestinal infections, but not all pathologies. Chronic pathologies such as hypertension or diabetes are not taken care of". Reported by Lagrange M. (Nov. 9, 2021)

A response to these concerns seemed initiated by the Minister of Health, who believes that the government was working to improve and enlighten citizens on the contours of this noble public health project in Benin, as he declared:

... we are dealing with the government and will find an answer in the coming weeks ... We will have an idea of the basic basket that will be set. We will have an idea of the basic basket that will be fixed. We should have an idea of this basic basket before having the actuarial cost of the basic basket". Reported by AB (2021 Nov. 29).

Although already echoed through the Government Action Plan, Zem's request for access to social benefits remains a legitimate right of the people as announced in the United Nations Sustainable Development Goals for 2030. The Benin Government Action Plan considers this recommendation of the SDGs in the context of “promoting the well-being of all” (SDG.3) and “leaving no one behind” (UNSDG, 2019).

Access to finance, education, and training

Financial concerns arise in all sectors of development and at all levels of the social, economic, and environmental life of individuals and nations. Personal life experience, observation, media, and reading, as well as interpersonal exchanges with individuals in the data collection process of this study, have fuelled the researcher's sense that lack of finance seems to affect the quality of life, educational attainment, job quality, and enrichment of individuals. A number of research studies confirm this sentiment of the researcher, specifying that lack of access to finance causes and exacerbates social inequality and the persistence of poverty. This is reflected in the work of (Adams et al., 2013; Coovi & Noumon, 2020; Allassane, 2021).

In general, access to finance appears to have a positive impact in that it reduces both income inequality and poverty levels. Conversely, lack of access to finance is discriminatory in that it seems to determine who can be an entrepreneur and who cannot, or even should not, just because of financial exclusion. This is what is felt by Zem operators about the ADEJ program for training and assistance offered in the context of youth entrepreneurship in Benin. Besides the level of study imposed as one of the criteria, access to finance is the real face of exclusion in this program that contributes to job creation and poverty reduction. Denying access to finance seems to discriminate against operators from accessing entrepreneurship and thus acts as an enemy of the outcome of this ADEJ program, all other things being equal. These considerations are in line with the research on the importance of access to finance in reducing income inequality and poverty level (Bae *et al.*, 2012).

Through the results of this study, it is understandable that operators wishing to reconvert place access to financing among the factors that can effectively contribute to their reconversion. This is consistent with the theory developed by Banerjee and Newman that the perfect functioning of the financial market offers access to all those with entrepreneurial ability and creativity, whether poor or rich, because of the easy and equal access to finance for all. On the other hand, in the case of poor functioning, the poor will not undertake even if they have the qualities. Indeed, they cannot raise the necessary funds to start a new business because the conditions imposed by lenders are beyond their reach, such as the guarantees imposed by banking institutions. A high proportion (63%) of operators surveyed mentioned the lack of collateral to mean keeping them away from bank credit access. This result is perfectly symptomatic of this precariousness as expressed by this key informant, a financial services official in Benin:

How can we lend money to a Zem operator? The guard does not even have identity papers; Some do not even have a place to sleep here in Cotonou. We lend money based on a guarantee; therefore, I am sorry but, the Zems do not have access to credit, at least in our financial institution. (Key informant – 15)

As a result, operators who wish to convert to entrepreneurship cannot do so, even if they have the capacity and willingness. Since small-scale entrepreneurship dominates the informal sector of the Beninese economy, Zems will only be able to convert to this activity if they receive financial assistance, among other things. This is in line with the strategy of the World Bank and PEJ project for the employment of unemployed and underemployed youth (WB, 2019). As for training, access to finance also impacts education and training. Education or training of

sufficient quality, adequate for the labour market, especially self-employment, which is of particular interest to the operators of Zems, is very important. The promoters of employment for young people, whether ADEJ or PEJ, have made this clear. This emerges from the PEJ project funded by the World Bank 2014-2019 (WB, 2019).

The training was necessary for Zem operators, especially for business plan design, small business creation and management, etc. Indeed, the design of business plans is one factor that excludes Zem operators from accessing the services of ADEJ, which only provides financial assistance to young people with a qualification, to start up activities, such as small businesses. In addition to improving their socio-economic well-being, operators mentioned access to land for market gardening in Cotonou, agricultural producers in general, product marketing and market security of local farm products, and the need for social networks with private sector companies to facilitate information on employment opportunities, etc.

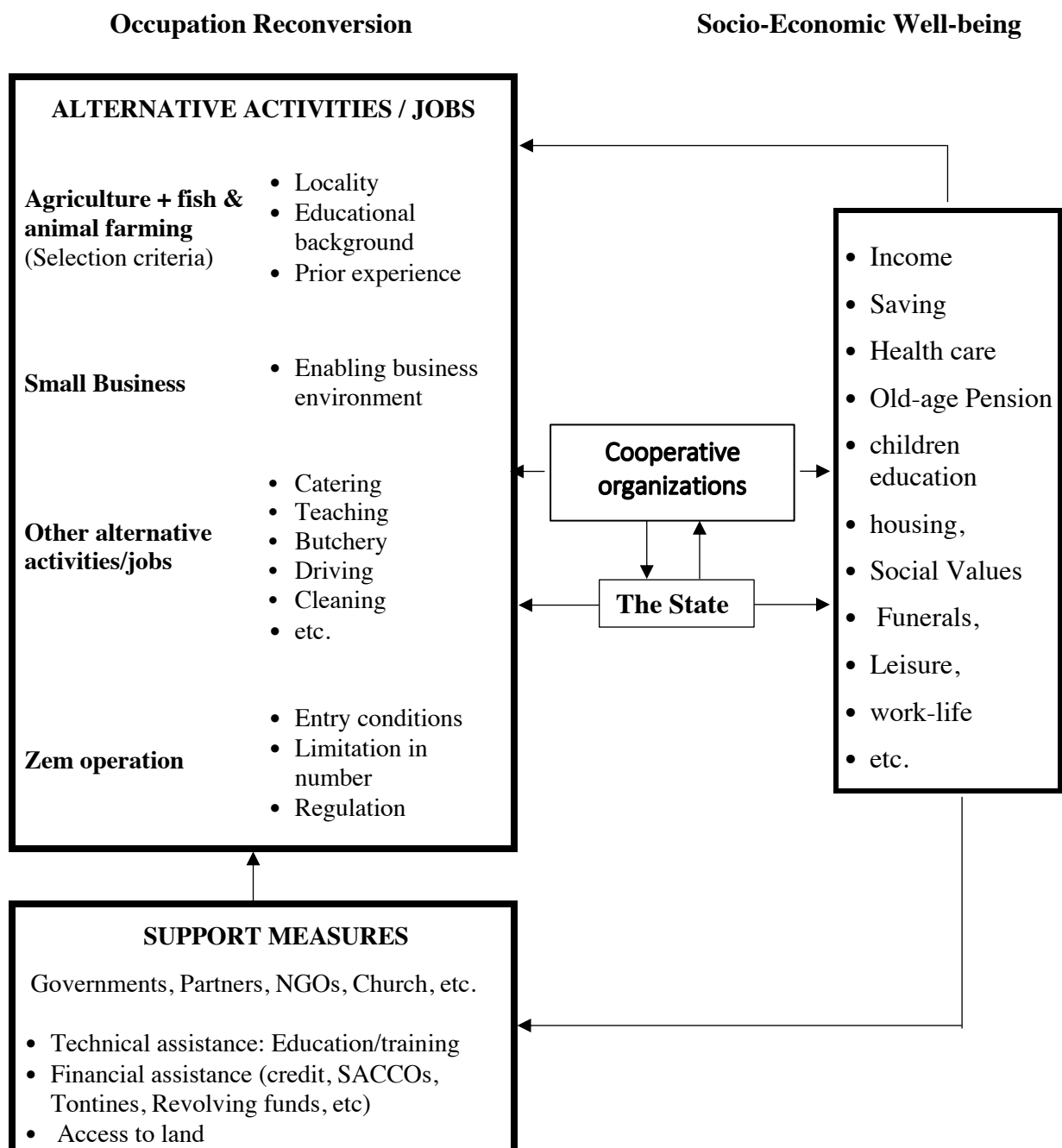
5.8 Revisiting the conceptual Framework

This study on reconversion in the Zem industry in Cotonou examined the individual factors affecting operators' socio-economic well-being and how they interconnect to explain their precarious living and working conditions. The conceptual model developed from the study's findings frames the interaction between the independent variables presented and the socioeconomic outcomes for Zem operators.

The model provided a functional framework for potential reconversion in the Zem industry. By proposing restructuring, downsizing, and resizing the industry to redirect a large number of operators to alternative income sources, the model offers ways to clean up the sector. This would reduce the risk of negative externalities associated with the business. The overall aim is to improve the socio-economic welfare of operators. The proposed conversion model for intervention in the Zem industry in Cotonou is presented in Figure 5.1.

Based on the findings, the study proposes to determine the expected outcomes in terms of SEWB for Zem operators first before designing strategies to achieve these results. This approach is consistent with mechanism design theory in economics. Typically, in economics, the process starts with an existing structure and tries to predict outcomes. Mechanism design theory instead suggests defining the desired outcome first, then working backwards to determine the system that can generate such an outcome.

Figure 5.1: Revised Conceptual Framework (model of reversing reconversion process)



Source: author

The study utilised mechanism design theory as part of the guiding frameworks. It proposes a model of intervention for reconversion in the Zem industry context. Specifically, the model considers the priority needs of Zem operators in terms of SEW. Operators prioritise health issues, making access to healthcare a key indicator of their SEW. As such, the study considers assistance through healthcare subsidies. It also proposes pension scheme subscriptions to mitigate the risks of poverty in old age, which operators are exposed to.

Income plays a role in enabling subscriptions to healthcare and pensions. In operationalizing the SEW variable, the study considered income due to its influence on choices like food, education, housing, family support, and funerals. Underlying income is employment or earning activities. As part of this study, operators proposed alternative jobs or activities they would consider for reconversion. Agriculture and small businesses topped their alternatives.

Therefore, the study focuses initially on Zem operators' needs around healthcare, pensions, and economic security relating to SEW. It then proposes working backwards to match activities from their alternatives to operator profiles, including origin, experience, skills, and qualifications. Ultimately, cooperative organisations play the role of intervening variables.

The results have broadened SEW indicators beyond the four criteria in this study's framework. The model now considers income, savings, healthcare, pensions, children's education, housing, social connections, leisure, funerals, and others. Three key constructs are identified for Zem operator reconversion: alternative economic activities and jobs (other income sources); improved and reviewed Zem operation; and support measures. Zem transport is still considered an alternative due to the potential future demand within Cotonou.

5.9 Revising theory

As the study's topic suggests, the purpose of this study was to examine how social and economic issues affecting ZOs community in Cotonou could be fixed. To better their socioeconomic well-being, a model was proposed to guide the development of a comprehensive reconversion program (intra and extra-industry reconversion). It was found that mechanism design, one of the theories guiding this research, can provide guidelines for designing complex systems that can yield expected defined outcomes in advance. Rather than taking an ex post approach of observing an existing system to predict outcomes, mechanism design theory supports an ex ante engineering perspective. By applying this theory, the reconversion program and environmental policies proposed have a stronger theoretical foundation rooted in purposefully designing the requisite frameworks to yield the intended results of addressing Zem operators' livelihood challenges and mitigating associated environmental issues.

Based on the revised conceptual model proposed by the study, Mechanism Design appears to be an appropriate theory to help design relevant guidance for operationalizing the recommendations of this research by facilitating the creation of targeted, outcome-driven solutions for reconversion in the Zem industry in a manner that enhances socioeconomic conditions, and environmental management in relation to Zems' pollution in Cotonou.

5.9.1 Improved theoretical framework

The theory of contestable markets, which was initially the main theory guiding this study, provides insight into revenue trends in the Zem industry (Baumol, 1982). It argues that potential entry keeps incumbent firms from raising prices excessively (Baumol et al., 1988) and suggests measures to restructure and regulate markets to improve revenue or quality of service (Baumol & Willig, 1981). However, it does not address the appropriate Zem industry structure needed to improve operators' socioeconomic well-being or provide guidance on designing such a structure.

In contrast, mechanism design theory (MDT) allows outcomes and structures to be considered from both directions. As an engineering approach in economics, MDT is known for its two-way policy implications. First, it involves defining a desirable outcome—in this case, socioeconomic well-being of ZOs—and then determining the structures capable of generating that outcome. It also informs when alternative structures may yield expected SEWB more effectively. Second, MDT provides guidelines for designing these structures.

MDT has been applied successfully in various domains. It has regulated environmental development and management by designing optimal tax structures to maximise public goods delivery at the lowest cost (Krause & Presser, 2004). For Zem operators' credit access concerns, MDT has designed new solutions in developing countries. In labour, it has shaped active market policies (Kluve, 2006). Environmentally, one of the purposes of the reconversion is to reduce health risks from gas emissions, particularly for operators. MDT advanced carbon cap-and-trade regulatory agendas by demonstrating they are more cost-effective than controls. It can similarly help reduce Cotonou's emissions exposure through reconversion programme design.

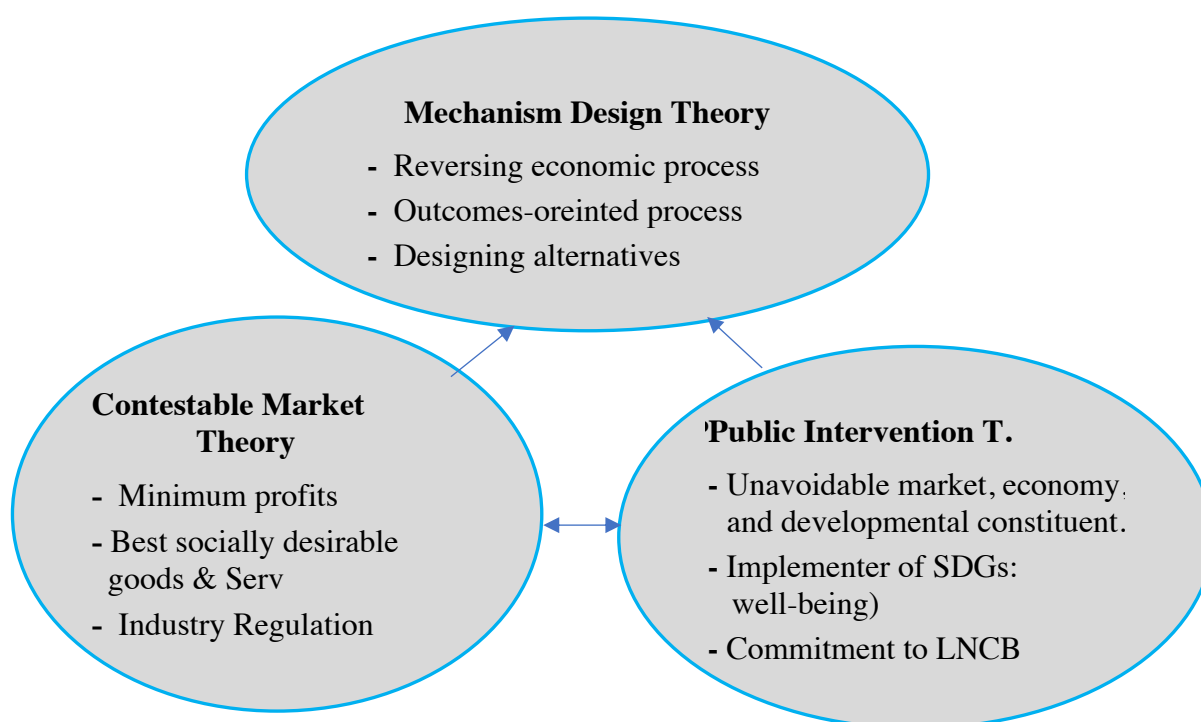
While insightful, contestable markets and MDT alone do not account for actors' functional roles in reconversion, Public intervention theory is also needed to address service provision, market regulation, capacity building, assistance, and monitoring and evaluation by authorities.

Upon analyzing results, MDT appears most apt for solving the socioeconomic problem of Zem exploitation through its outcome-to-structure approach. Combined with contestable markets and public intervention theory, the revised framework narrows to theories of social transformation and willingness to reconvert, illustrated in Figure 5.3.

Ultimately, at the end of the analysis, the interpretation of the data, and the results of this study, the theory of mechanism design appears to be the most appropriate to use as a lever to solve the problem studied in this research, i.e., the social and economic problem posed by

the exploitation of Zem transport in Cotonou. With the contribution of public intervention theory and the primarily leading theory of contestable markets, the revised theoretical framework helps to narrow down to an emerging theory of social transformation and an investigation into the theory behind ZOs' willingness to reconvert. Figure 5.3 illustrates the revised theoretical framework for this study.

Figure 5.2: Revised Theoretical Framework



Source: *author*

5.9.2 Social transformation to take place in the Zem industry

The outcome-oriented reconversion model resulting from this study (Fig 5.1) suggests that a process of first defining indicators of improved and attainable socioeconomic well-being, and then identifying the factors that need to be acted upon to achieve it, is likely to transform the lives of Zem operators in Cotonou. Indeed, these factors should be able to enable operators to make rational alternative decisions, thereby taking control of their own lives, and even, predictably, choosing their standard of living. Consequently, the study assumes that qualitative progress in their socio-economic well-being will be achieved.

From this standpoint, the study posits that a combination of human capital development (capacity building), technical and financial assistance and various alternative employment opportunities can enable Zem operators to make alternative decisions to transform their lives as they work their way out of hardship. With this shift in focus to the socioeconomic well-being of Zem operators, social transformation aims to give them more control over their own lives, so that they are better able to withstand various shocks, such as the likely lack of financial security in old age. The agents of this transformation are the Zem operators themselves, who can band together in solidaristic cooperatives to challenge the bank lending systems and other economic and financial facilities from which they are excluded. Government and development partners must also work hand in hand to optimize economic activities in sectors with high potential for job creation to absorb the low-skilled labour force operating in the Zem industry.

5.9.3 Emerging Theory Behind Reconversion Intentions

Although not the original focus, this study has highlighted an attempt to explain the widespread intentions for reconversion amongst Zem operators, as expressed by 334 operators representing 84.6% of ZOs surveyed. This result is remarkable given the potential opposition to such initiatives in the past.

The emerging theory proposes that, faced with dissatisfaction in their current occupation and concurrently harbouring a pessimistic outlook on their future within the existing occupation, Zem operators may exhibit a heightened willingness to explore alternative livelihood opportunities. Specifically, exposure to dissatisfaction in the present job, coupled with a bleak outlook for the future if reliant on Zem work long-term, could combine to generate openness to quitting and pursuing alternative livelihoods. However, it is crucial to underscore that this assumption remains theoretical and necessitates empirical testing to substantiate its validity.

Although the study did not attempt to develop a comprehensive theoretical framework, the results suggest that it may be a fruitful line of research to systematically test the relationships between present job dissatisfaction, future outlook, and willingness to change occupations.

5.10 Integration of qualitative and quantitative approaches

This study is based on empirical research that explored the reconversion in the Zem industry in Cotonou to improve the SEW of the operators. The fundamental theoretical framework of the study is the industrial markets approach (constable markets) supported by the engineering part of the economy consisting of designing structures able of generating predefined outcomes. The basic conceptual framework, consisting of influence variables and the response variable, is supported by market and state mediation as intervening variables. A concurrent mixed research approach combining quantitative and qualitative methods was adopted to examine the specific objectives and test the hypotheses of the study. As presented in the methodology section of this study, quantitative and qualitative approaches were integrated in the data collection process and in the data analysis. This section examines and presents how the qualitative and quantitative findings are related in terms of modelling the factors influencing the SEW of Zem operators in Cotonou and the potential for economic reconversion.

The quantitative data was analysed in four stages according to the four hypotheses of the study. The analysis procedure was identical and led to testing the influence of Zem industry structure (ease of entry), educational background, business regulation, and access to finance on ZOSEW in Cotonou. The analysis procedure adopted resulted in the rejection of all the null hypotheses related to the four first objectives. Although the fifth objective is typically qualitative, quantitative analysis contributed to the examination of certain aspects, including the quantification of information regarding willingness to reconvert and the analysis of alternative activities considered for reconversion. The qualitative approach explored additional information not revealed by the quantitative information. In addition, it allowed for the deepening of quantitative information on the influence of industry structure, educational background, business regulation and access to finance on the ZOSEW. The analysis of the fifth objective was based on qualitative information on the determinants of reconversion in the Zem industry. This qualitative analysis was also supported by quantitative data that allowed for a better understanding of the scope of certain findings.

The study adopted the simultaneous triangulation approach in order to cross-validate the results, thus providing a deeper understanding of reconversion in the Zem industry. In fact, the analysis procedure adopted allowed the quantitative and qualitative approaches to be conducted within an overall conceptual framework. This also shows that both approaches were designed with similar ideas and structures. The evidence generated by the two approaches was therefore

easier to compare and cross-check to achieve the objectives of complementarity. The triangulation corroborated the empirical results of the quantitative approach, which showed that variables such as market structure, educational background, business environment regulation, and access to finance influence the SEW of operators. This reflects the fact that hypothesis testing on the stated explanatory variables rejected the null hypothesis, meaning that the explanatory variables have relatively significant influences on the socio-economic welfare of Zem operators. For example, the ease of entering the Zem market and doing business, the level of education of Zem operators, the business environment, and access to finance appear to affect the SEW of operators in a relatively significant way. Similarly, the qualitative study revealed that the relationship identified in the quantitative study does have an observable influence on operators' income and SEW.

5.11 Personal Reflection: Reconversion for social transformation

This section discusses the general idea of social transformation narrowed down to the particular context of conversion for social transformation in the community of Zem operators in Cotonou. It also discusses the factors that may hinder this transformation process (possible obstacles), the actions that are taken, and the resource persons, bodies, and partners, including the Church.

5.11. 1 Social Transformation in the Zem industry in Cotonou

As much as motives such as the precarious living conditions of the Zem operators inspire the idea of a social transformation in the Zem operators' community, it is likely that the transformations that occur in different communities have various causal explanations. Cultural, sociological, and psychological conditions are often behind the typical transformations in any society. According to (UNESCO, n.d.), when talking about social transformation, the tendency is to focus on big transformations resulting from political, economic, and social movements leading to mega changes. But more specifically, social transformation refers to social processes that bring about big changes that improve the quality of life for individuals or communities based on economic, social, and environmental factors like education, health care, and political structure (Selvam & Pierli, 2017).

From the perspective of the Sustainable Development Goals (SDGs), social transformation takes place through these processes of progressive change on a small or medium scale that lead to improved awareness of one's rights and duties, access to decent work, housing, health, education, water, financial security, and social protection. In this sense, social transformation involves building a society in which individuals have the opportunity to realize their rights to education, health, livelihoods, and other social benefits through an inclusive and sustainable social, economic, political, and environmental system. Within this perspective, economic reconversion, as a measure of more effective adjustment to the ever-changing world of work and the highly dynamic economic environment, appears to be a central strategy for addressing the social transformation of the Zem operators' community in Cotonou. To this end, the study considered it essential to provide the Zem operators with opportunities to make rational choices or alternative decisions that could help improve their SEW.

Drawing on the results of this study, the social transformation envisioned in the community of Zem operators in Cotonou translates into a qualitative paradigm shift, heralding a qualitative leap forward in the standard of living of operators through economic reconversion in the Zem industry. Consequently, this study posits that the social transformation that can take place in the Zem community depends on the range of opportunities available to individual Zem operators to make alternative decisions and rational choices aimed at enhancing their socio-economic well-being. To elucidate, prospective transformation within the Zem operator community depends on the facilitation of enabling social, economic and environmental conditions, encompassing various facets of livelihoods. This implies that operators gain the capacity to formulate sound decisions and make rational choices, guided by the socio-economic indicators examined in this study, specifically encompassing income, savings, healthcare, and old-age security provision.

For this study to have analytical value it was imperative to rigorously interrogate the contextual conditions and socioeconomic factors that enable or constrain opportunities for Zem operators to exercise alternative livelihood choices impacting their socioeconomic wellbeing (SEWB) and potential trajectories of social transformation. Toward this end, this study employed robust quantitative measures and hypothesis testing to elucidate the structural influence of key market dynamics on operator outcomes. Specifically, regression analyses revealed the Zem transport sector's structure—notably, the ease of market entry—to have statistically significant predictive power regarding operator incomes and broader SEWB. Comparable explanatory relationships were demonstrated through hypothesis testing of

variables including access to capital financing, operators' educational backgrounds, and the regulatory environment governing business operation. These quantitative findings make a compelling argument that policies addressing structural barriers and facilitators within the informal transport economy could meaningfully impact operator livelihoods and quality of life.

While Selvam and Pierli (2017) did not overtly oppose the notions of development and social transformation in a systematic manner, their work nevertheless brought nuanced consideration of these interconnect yet distinct processes. This study asserts that economic development and social transformation are intrinsically and systematically interconnected. It posits that political development, through expanded democratic representation and accountability, coupled with inclusive economic development and effective redistribution of growth dividends, form the requisite socio-institutional foundations for holistic social transformation aimed at substantively improving the quality of life of citizen, including ZOs. Consequently, a robust analysis framework is required to rigorously interrogate the multivariate macro-level influences, and interplay—spanning the social, political, economic, environmental, and regulatory spheres—that bear upon ZOs' socio-economic wellbeing. Equally vital it is to Psycho-sociologically and legally, examine the multifaceted lived experiences and subjective perceptions that shape individual motivations and constrain or enable transformative agency within the specific context delineated herein.

5.11.2 Hindering factors to the reconversion in the Zem industry

Overcoming structural barriers to a successful reconversion of ZOs necessitates aligned political will and policy continuity. However, Benin's political environment evinces certain hindering dynamics. As Wantchekon (2011) elucidated, electoral clientelism breeds competing factional interests, hindering consensus around sensitive issues like Cotonou's Zem phenomenon. Informants disclosed that some politicians advocate downsizing for populism, while others strategically court Zem constituents.

Programmatic discontinuities across successive governments also undermine reform momentum. A key stakeholder noted that funds withheld by the national government thwarted a promising municipal-led reconversion pilot. This reflects a lack of policy durability as new administrations eschew predecessors' initiatives. Furthermore, public perceptions of Zems as communicated threats complicate reform. Marchais (2009) documented a dehumanizing rhetoric casting them as "vulgar unemployed or ill-educated, dangerous, and mean-spirited

countrymen. A psycho-sociological lens probing such deprecatory framing merits consideration. How do macro-level political dynamics of clientelism and short-termism curb the will to tackle entrenched socio-economic issues regarding Zem sector? How do shifting popular perceptions and othering discourses shape the subjective experiences of the Zems and constrain transformation? Addressing these questions could inform designs to foster robust, compassionate, and sustainable policies supporting ZOs' livelihood transitions and social inclusion.

5.11.3 Expedite factors to the reconversion in the Zem industry

On the political level, a coherent and unifying development programme is likely to counteract the totalitarian drift of certain politicians who accede to the supreme magistracy. Each new government should therefore commit itself to following the programme while retaining a degree of flexibility to deal with unforeseen dynamics. The concept of a "common social minimum" (CSM) proposed by the former deputy director-general of the ILO, Albert Tovoedjre, on behalf of Benin's political class can be seen as part of such a shared vision of development. The CSM goes beyond simple survival strategies and sees development as the capacity of a nation to provide its citizens with essential necessities such as food, housing, education, leisure, access to equitable justice, and decent work. Although it has no intrinsically effective characteristics, it can be incorporated into initiatives and strategies aimed at implementing the reforms recommended by the BWI to combat the 1990s crisis. Integrating this concept into sustainable development would make a positive contribution to social transformation. Instead, successive governments have tended to rely on their own development plans that ignore the CSM. This study suggests that rallying around a unifying programme to achieve a sustainable development goal can be an important step towards achieving positive social change.

From a social and economic standpoint, the Zem industry is burdened by an influx of operators from rural areas, underscoring the need for policymakers to address unresolved socio-economic issues in the countryside. As long as this status quo persists, the problem of Zems in Cotonou and the associated negative externalities will continue to plague society. A strong point is that most ZOs surveyed as part of this study were willing to make a transition to the agricultural sector as a viable alternative. However, they face the challenges of lack of land, resources, low yields, and market access while having to rely on traditional modes of production

still prevailing in Benin. In addition, workers in the informal sector, including Zem and other casual workers, are unorganised and unprotected. To deal effectively with the Zem issue, decisive action must be taken to address the problems of equity, exclusion, and organisation in this sector.

Under these circumstances, a comprehensive and far-reaching programme supporting small farmers can act as a catalyst for social transformation. No process of modernization and democratisation can be achieved without at least partially tackling the issue of agriculture, which is the foundation of Benin's economy. This requires a bold political initiative on the part of the government and a major commitment of resources. Given recent and forecast economic growth rates, it is believed that the country holds the necessary resources; otherwise, reported growth figures will lack credibility if they do not translate into improved living standards. Still, the government alone cannot solve all the country's problems, as new challenges frequently arise. Nevertheless, tackling current development challenges can help limit the emergence of some future challenges. Therefore, addressing issues such as ZOs' reconversion and the transformation of agriculture to serve as an alternative can foster social cohesion and serve as a litmus test for the government's ability to respond to emerging challenges. Achieving the desired transformation requires the support of social, economic, and political organisations to strengthen the government's capacity. The priorities should be allocated to the various socio-economic and political strata, enabling them to contribute fully and helping the government meet the socio-economic and environmental challenges. Thus, transformation must occur at the individual and societal levels to achieve national-level transformation. This implies that institutions such as civil society leaders, businesses, politicians, scientists, economists, educators, and non-profit group leaders, as well as individuals from all walks of life, including parents, employees, and citizens, must wholeheartedly focus on fulfilling their specialised roles. Schools should provide education, hospitals should provide unbiased healthcare services, businesses should produce goods and services, and capital should be allocated to future risks through revolving funds. Each entity must competently fulfil its social function for the greater good. In this context, Zem operators can play a role in helping the government improve their living conditions.

From an environmental point of view, it is hardly possible to imagine Benin's economic capital without its symbol, the Zems, which are deeply rooted in the culture of the Beninese people, unless they are offered alternative income-generating opportunities. Furthermore, given the public health problems associated with greenhouse gas emissions, which are partly

attributed to the Zems, they can play a part in efforts to preserve the environment. In Benin, the cultural background of the people fosters a sacred union with nature at spiritual and religious levels, emphasising their innate respect for social, humanistic, economic, and environmental values. Sacred groves, consisting of forests, savannahs, deserts, and mountains, are preserved for traditional rites and are strictly protected. Cutting down trees in these forests is usually forbidden. Sacred groves are ancestral legacies passed down from generation to generation, serving noble functions such as maintaining intergenerational solidarity. Given this environmental protection background, the adoption of a bottom-up and inside-out communication approach in collaboration with Zem operators can effectively address the ecological impact of human and economic activities in Cotonou.

5.11.4 Strategic Actions for Reconversion

Initiating awareness stands as the primary catalyst for the transformation of Zem operators. This role involves active engagement with Zem operators and their Union leaders, leveraging health risk communication, and showcasing the sector's declining income. The collaborative efforts of Zem operators in their own reconversion process can draw insights from prior projects, offering valuable lessons and inspiring innovative strategies.

Moreover, the study's analysis of access to credit indicates its pivotal role in the socio-economic well-being of Zem operators. The multiple regression equation highlights the impact of education, revealing that a one-unit improvement enhances Zem operators' socio-economic well-being by 0.105. This emphasises the significance of continuous education and training for the successful social transformation of Zem operators.

Additionally, addressing the credit gap is imperative. The study underscores that insufficient access to credit significantly hampers Zem operators' SEW. A proposed solution involves establishing revolving funds, acknowledging the challenge of loan repayment for Zem operators. Collaborative efforts from the government, local and foreign development partners, NGOs, and non-profit organisations can contribute to creating a financial pool. This revolving fund is tailored to benefit Zem operators organised in small cooperatives, ensuring more inclusive support.

Crucial actions include steering clear of divisive political debates between interventionists and advocates of market-led conversion. A suggested intervention policy involves the government absorbing citizens seeking new economic activities. Research-driven identification of profiles within the Zem industry aids in determining the job market for

graduated Zem operators. The government can create employment opportunities by revisiting privatisation policies and reinforcing mechanisms for job creation.

Furthermore, investing in domestic industries, particularly in sectors like agricultural processing, textiles, garments, and shoes, aligns with local preferences. This stimulates employment, absorbing surplus agricultural labour from the Zem industry. In the agricultural sector, collaboration with development partners can enhance economic attractiveness, resulting in increased incomes for workers and improved living standards.

Highlighting the potential employment multiplier effect linked to agricultural growth emphasises the transformative impact on socio-economic conditions. Recognizing the people-centered actions of faith-based organizations, notably the Catholic Church through "Caritas," positions them as valuable partners in supporting the government's efforts for the Zem industry's reconversion in Cotonou.

5.11.5 Transformative Social Teaching of the Church: A potential partnership

The conversion process may not engage all the Zem operators involved. Some will be reluctant; others may not be able to follow the process for various reasons. Since the designers of the conversion program must involve local communities, NGOs, and development agencies, Caritas, an institution of the Catholic Church rooted in the Church's social teaching, can be an effective partner in the social transformation envisioned in the Cotonou Zem industry. Indeed, the founding principle of the Church's teaching and social transformation is based on its conviction that human persons are more important than goods and that employment is more important than capital. The Church believes that the economy should be at the service of the people and not the other way around.

Furthermore, the Church believes that the economy should be based on a fair distribution of resources and not exploit the poorest. Pope Benedict XVI has strengthened the Church's social action by emphasizing the empowerment of the individual as a priority, as it promotes freedom and participation (Pope Benedict XVI, 2009). Inspired by this social teaching of the Church, Caritas bears witness to God's love through concrete actions for sustainable, inclusive, and solidarity-based development. Caritas offers a unique, cross-cutting, multi-level approach to integrating the Catholic Church's social teaching principles. Thus, Caritas is fundamentally a privileged partner in sustainable human development, responding to the emergencies of the poor. It is present wherever the Church is present and, therefore, in Benin.

The organization of Zem operators into cooperative groups is necessary since international institutions and development agencies work more with groups or communities than with isolated individuals. In this sense, the architecture of the Catholic Church may lend itself well. In Benin, as elsewhere, the Church is organized into dioceses and dioceses into parishes, parishes into base communities, etc. So, involved, each parish of the Diocese of Cotonou could organize the resident Zems in its space. If necessary and if the size of the group requires it, subgroups can be considered. The Diocesan Caritas of Cotonou is the local branch of the national Caritas of Benin. Experienced in sustainable human development interventions, National Caritas, in association with the international Caritas, can propose an adapted program and action plan in line with the government's plan.

However, other faith-based organizations present in Benin should be involved for two reasons: First, despite its long experience in sustainable human development, the Catholic Church cannot be considered a repository of knowledge in matters of sustainable human development. The second reason is that the Zems' operators targeted for conversion to improve their SEW belong to various religious movements and faith-based organizations. It would be appropriate for these organizations to support the government and work in solidarity to improve their fellow citizens living and working conditions, which is not a priori a matter of faith.

However, this appeal to faith-based organizations, while also contributing to social transformation at the level of faith communities, remains very sensitive. Differences in religion and faith divide people more often than bring them together. The Catholic Church already has a relatively rich experience in ecumenism, that is, in working with other religions that believe in the God of Abraham, Isaac and Joseph (Matthew 22:32), Creator of heaven and earth. This is not the case with other religious communities. Thus, careful study and preparation of the process of (working together) are necessary before any association.

Ultimately, the social teaching and social transformation of the Catholic Church are similar to the social transformation envisioned in the Zem industry in Cotonou. In the concrete plan of action to be developed, Caritas could be a powerful partner in the social transformation envisaged in the Zem industry. Furthermore, it is essential to involve other humanitarian institutions, NGOs, and development agencies with poverty alleviation programs to cater to those likely to be left behind, such as the reluctant and those who may not be able to retrain properly.

5.11.6 Transformative Socio-political and Economic Fundamentals

The conditions for achieving social transformation in the Zem industry require the existence of a democratic state where the rule of law prevails. The fear of respondents signing the consent form and answering certain questions will likely hamper initiatives, action, and creativity. Democracy, the rule of law and development are linked in the sense that there is no development without democracy and no democracy without development. In this regard, the state that can implement the envisaged transformation must be a democracy with robust principles of decentralisation and devolution. These would bring services closer to the people to reduce the rural exodus to Cotonou and the massive invasion into the economic activity of Zem to survive.

Regarding job creation, a fair sharing of the fruits of the growth recorded in recent years should lead to more opportunities for the population, including Zem operators. The current State Minister, Abdoulaye Bio-Tchané, believes that a growth rate of around 7% will be needed to reduce youth unemployment (Jeune Afrique, 6 Dec. 2014), which he rightly considers a serious public security issue. However, the country has announced glowing growth rates, but the situation of Zem operators has not changed. Carefully the words of this minister, an economist, can be put under the assumption of "ceteris paribus" (all things being equal) only that the economy is, after all, reality explained by economic principles and theories. But, in reality, all things are not always equal, and Covid-19 passed in 2021. Consequently, any social transformation must learn to deal with unforeseeable events. Hence the combined effort of all the bodies supporting the government is vital: educational and health institutions, civil society, the Church, civic and patriotic individuals, and so on, can make their specific contributions to this transformation.

Conclusion

Occupational reconversion implies the existence of alternative jobs. In this regard, policymakers, and the World Bank draw attention to the importance of industrialisation in Sub-Saharan Africa for its potential to generate employment. Considering that the latest results of economic growth in Benin in recent years have been overall encouraging, it would be appropriate to support this with structural transformation for sustainability in terms of productive jobs creation for the population. This transformation implies, among other things, the need to propel workers from the low-productivity agricultural and informal sectors to

higher-productivity activities. In this sense, the light industry can offer a viable solution for the sustainable reconversion of Zem operators for its potential competitiveness based essentially on a relative abundance of natural resources to provide raw materials necessary for these industries. Thus, clothing and leather goods such as footwear production, metal products, agro-industry, wood products, et cetera. are sectors to be developed and optimised. Successful examples from Zambia, Rwanda, Botswana, Ethiopia, and elsewhere in Africa ((Dinh et al., 2012) can serve as an inspiration to be adapted to Benin's particular circumstances. In any case, the rational exploitation of Benin's latent comparative advantage in certain light industry sectors deserves to be considered. In addition, reducing barriers to investment in industries likely to absorb this intensive unskilled labour from the Zem sector will be a key efficient policy decision in social transformation in the Zem operators' community in Cotonou. Donors, private sectors, local entrepreneurs, civil society, NGOs, and individuals must be sensitised and brought together to work hand in hand with Benin public authorities.

CHAPTER SIX: SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Guided by the objectives and outcome, this chapter summarises the main findings of this study, presents the researcher's personal reflections, draws implications, explains the contribution of the study to the body of knowledge and to social transformation in the Zem industry in Cotonou, makes recommendations for policy, practice, and suggestions for future research.

6.2 Summary of findings

Objective One: To establish the influence of entry conditions into the Zem industry in Cotonou on operators SEW.

The study's first objective was to establish the influence of entry conditions into the Zem industry in Cotonou on ZOSEW. The study found that ease of entry had a statistically significant influence on the ZOSEW. Increasing degrees of constraints to ease of entry exerts adverse repercussions towards the socio-economic well-being of the operators. When the start-up cost is higher, there is a decrease in the SEW of operators. Similarly, increased exit costs also decrease the socio-economic well-being of operators in Cotonou, Benin.

Objective Two: To examine the influence of the educational level of Zem operators in Cotonou on their socio-economic well-being.

The findings of the study revealed that educational background had a significant influence on the operators' socio-economic well-being. Higher levels of education concerning skills, qualifications, and competencies are of high importance to individuals, bringing about improved business decisions and hence, better SEW. Adequate educational background influences how Zem operators conduct their business leading to disparate levels of socio-economic well-being. Based on this, the lack of proper education hampered the progress of many Zem operators in terms of being innovative and not qualifying for some essential technical skills training opportunities. This is as the more learned operators leverage reconverting to more lucrative businesses. The operators' education helped them carry out Zem business with respect to interpersonal skills, hence impacting positively on their SEW.

Objective Three: To determine the influence of business regulation on the SEW of Zem operators in Cotonou.

The study sought to determine the influence of government business regulations on the socio-economic well-being of Zem operators in Cotonou, which made up the third objective of the study. Hence, it was concluded that government business regulations had a statistically significant negative influence on the operators' socio-economic well-being. The prevailing corruption practices in the system seem to be one of the detrimental factors in enhancing socio-economic well-being. The absence of regulations leads to illegal operators in the Zems industry. Conversely, stringent levels of procedures and other formalities negatively affected the SEW of operators. Government business regulations in the Zem industry stand as barriers and facilitators to entry and exit into and out of the market.

The saturation of the Zem industry by operators is due to the non-adherence to the sub-sector business regulations and government failure to enforce them, resulting in lower earnings, lower savings and increasing vulnerability to economic shocks, thus negatively affecting the socio-economic well-being of operators.

Objective Four: To establish the influence of access to finance on Zem operators' socioeconomic well-being.

Concerning credit access among Zem operators in Cotonou and their socio-economic well-being, the study concludes that credit access is a crucial factor influencing the socio-economic well-being of operators. Lack of information on the formalities for accessing credit was one factor impacting the operators' socio-economic well-being of the operators. A high-interest rate hinders access to formal loans, which negatively affects the socio-economic well-being of operators. Dishonesty of some operators contributes to the low disbursement of loans to the Zems sector. Due to a lack of credit access, most Zem operators encounter difficulties when seeking capital towards the improvement of their investment and reconversion. The study concludes that the lack of credit access is largely attributed to the underlying discrimination faced by operators in the Zems industry from lending institutions. Despite the significance of commercial motorbikes, much attention is not given to the operators regarding credit accessibility. The lack of access to well-structured, tailor-made, and feasible financial facilities for Zem operators has negatively impacted their socio-economic well-being.

Objective Five: To explore how Zem operators can reconvert their economic activity to boost their income and well-being.

The fifth objective of the study explored how Zem operators can reconvert to boost their income and well-being. The study's findings showed that the government's measures to regulate the Zem industry are ineffective, and the sector is overloaded with legal and illegal operators. The Zem business's earnings are declining, while health issues arising from the business are becoming more evident. Consequently, 334 operators representing 84.6% of ZOs expressed their willingness to reconvert, while 61 i.e., 15.4% were undecided or not willing to quit. The reasons behind the intention to reconvert were mainly, economic, health, life-work unbalance, social values, and mismatch between Zem occupation and qualifications and skills. Reconversion was associated with voluntarism and involuntariness, proactiveness and reactiveness, enthusiasm and reluctance. Alternative activities to be considered range from agricultural and farming, crafts, and small business, to public and private services. Reconversion in terms of restructuring the Zem industry, education or vocational skills, and technical and financial assistance was found by respondents and key informants to be vital in reconversion, implying that the government and other stakeholders must combine synergy and offer appropriate training and advice for effective reconversion.

However, most of the interviewed key respondents insisted on the need to conduct an inventory of the skills possessed by individuals in Zem operators and their vocational interests rather than assuming everybody should reconvert to, say, agriculture. There was also the idea that the government could speed up the change by improving and streamlining public transportation in cities, making Zem operators less desirable.

Experience from those who have managed to reconvert to new activity gives insight into several ways Zem operators can undergo social transformation through reconversion to sustainable development projects. These reconverted ZOs testified to greater job satisfaction, including better job security and work-life balance. Having trained in a vocational course, one could venture into various businesses such as agriculture and market gardening, dressmaking, plumbing, electrical installation, masonry, information and communication technology, *et cetera*. Various funding sources were also identified, such as the government, NGOs, and international bodies through grant proposal writing, and from family members.

It is noteworthy that the income from the aforementioned vocational occupations may not amount to much, but as Somaratne *et al.* (2011) explicated, *SEW* can generally be defined

as perceived levels of satisfaction by individuals towards the social and economic standards that they enjoy. Further, well-being can be viewed in terms of health, education, social relations, the natural environment, and a sense of physical and economic security (Naradda, Gamage *et al.*, 2017).

6.3 Conclusion of the study

The Zem Operators (ZOs) in Cotonou are widely acknowledged to endure subpar living and working conditions, adversely affecting their Socio-Economic Well-being (SEWB). This study endeavoured to scrutinize the factors underpinning the deterioration of their living conditions and to discern viable avenues for improvement. The study explored economic reconversion as a catalyst for social transformation within the Zem Community. Factors identified, including ease of entry, educational background, business regulation, and access to financing, were found to have statistically significant influence on the SEWB or the ZOs.

Ease of entry into the Zem industry emerged as a critical determinant, showcasing a negative impact on ZOSEWB. Simultaneously, the study revealed adverse effects on ZOSEWB due to governmental regulation failures and diminishing access to credit. Conversely, a higher educational level was associated with an enhancement in ZOSEWB. These factors underwent rigorous statistical testing at a 5% significance level.

Participants' responses concerning reconversion intentions were correlated with various socio-economic and demographic characteristics, along with the operational structure of Zem activities. This encompassed factors such as age, dependency, education, job entry conditions, qualifications and skills, job satisfaction, intentions to leave, job search effort, reluctance to leave, among others. The study uncovered a substantial inclination (86%) among ZOs to depart from Zem economic activities. Job satisfaction emerged as a pivotal factor linked to the intent to change jobs, though a lack thereof may not be the sole motivator for pursuing alternative employment.

Individual characteristics, such as age, education, prior experience, seniority in Zem operations, and dependency, were identified as contributing to the intention to quit. ZOs displayed more concern about economic and health discontent, work-life balance, and job inadequacy concerning qualifications and skills than employment security. Alternative livelihood activities for reconversion ranged from public or private services to small businesses, crafts, trade, and prominently, agriculture. Interviews with ZOs who have reconverted to

alternative income sources highlighted increased job satisfaction, improved job security, reduced working hours, and enhanced work-life balance.

Contrary to the conventional conception of grassroots movements driving social transformation, this study posits a potential for a seamless, peaceful, and effective social transformation within the Zem community. This prospect is contingent upon empowering operators with a diverse array of opportunities, enabling them to make alternative decisions and thereby gaining control over their lives. This empowerment is crucial for navigating shocks and challenges such as job insecurity and poverty in old age, ultimately enhancing their socio-economic well-being. Consequently, the study recommends the incorporation of policies explicitly tailored for social transformation in the Zem industry in Cotonou within local and national governments' action plans to promote the well-being of all.

Further, predicting that even the most hesitant ZOs may voluntarily undergo reconversion in an improved labour market with more opportunities and decent wages, the study suggests exploring sectors with potential for employment, especially for the low-skilled workforce in the Zem industry. Public intervention, in the form of state-mediated reconversion, can overcome the limitations of market forces, facilitating alternative livelihood activities and employment prospects, thereby cleaning up the Zem industry, enhancing profitability and ZOSEWB, and managing public health issues associated with gas emissions from Zems, more effectively.

Ultimately, in its conclusive findings, this study robustly asserts the evidence of a paradigm shift within the realm of work, characterized by a perpetual and dynamic state of ever-evolving challenges. This necessitates an enduring and continual process of reconversion, demanding adaptability from both existing workers and prospective jobseekers to effectively contend with the evolving dynamics of the global work landscape. Departing from conventional conversations surrounding job insecurity and uncertainty, the study staunchly advocates for a renewed perspective, urging a departure from entrenched norms in navigating the tumultuous and unpredictable nature of the contemporary world of work. Furthermore, it proactively suggests the exploration and consideration of a nomadic jobs approach as a forward-looking paradigm to address the multifaceted challenges posed by the modern employment environment, especially in the informal sector.

6.4 Recommendations

The implications of the four hypotheses tested concerning objectives one, two, three, and four suggest restructuring and regulating the Zem industry, empowering ZOs through education, and creating an enabling environment for access to finance. Regarding the fifth objective as the focus of this study, reconversion in the Zem industry, the study recommends that, given the declining incomes in the Zem industry, the government and other development partners should provide adequate guidance and training for effective reconversion through education and vocational skills. For this reason, the skills of operators should be assessed and supported based on their vocational interests rather than pushing them to venture into a particular activity outside their area of interest and expertise. The government can induce rapid reconversion by improving and streamlining urban public transport, rendering Zem transport less preferable. As a result, those who enter the Zem industry in the future will be those who are genuinely interested in it and prepared for it, and not because it is the only option available. Therefore, the government should employ economic reconversion as a strategy to address the precariousness of employment in the informal sector through vocational education and training, enabling thus young people to develop creativity, initiative, and skills they need to seek employment or change jobs.

Further, more elaborate recommendations were discussed, both for local and national poverty reduction mechanisms, NGOs, and others, as well as for Zem practitioners. Among other things, the study urged the government's anti-poverty machinery to investigate viable initiatives to address the youth's massive engagement in Zem economic activity.

The study as such focused on three areas of recommendations for poverty reduction mechanisms, namely **Government** (at national and local levels), **NGOs**, **development partners** and **other poverty reduction bodies**.

- First, regarding human capital development, investing in people through education is vital. From this perspective, efforts should be made to reintegrate individuals who have dropped out of both formal and non-formal education systems, especially apprentices who have disengaged from learning centres. Providing comprehensive training that equips them to compete in the job market, including the informal, and even empowers them to set up their own businesses can uplift socioeconomic welfare. This not only will contribute to enhancing socio-

economic well-being but also serve as a potent means to curtail delinquency and public insecurity. Simultaneously, as individuals take control of their own destiny, it lessens dependence on public resources, allowing national wealth to be distributed among fewer recipients and bettering living standards for all. With support and second chances, those who falter in their education need not be lost causes doomed only to engage in Zem, but can instead contribute to their fulfilment and that of their communities through skills and self-sufficiency. The dual impact of fostering individual empowerment and diminishing the societal burden underscores the significance of this approach in promoting sustainable economic and social resilience.

- Secondly, comprehensive macroeconomic reforms are imperative to generate widespread benefits. Sound economic policies that encourage domestic and foreign investment at all levels are essential for stimulating growth and employment opportunities. Small businesses, the lifeblood of any thriving economy, require stable conditions unfettered by excessive taxation or regulation that strangles entrepreneurship. As the lifeblood of the national economy, small and medium enterprises must be supported through secure environments, technical assistance, and access to affordable capital to allow unhindered development and job creation. This enabling policy milieu would successfully transition Zem workers into viable alternative livelihoods and equip youth with marketable skills and work experience for their integration in Benin's workforce. The study recommends policy initiatives aimed at alleviating credit constraints, fortifying infrastructure, and cultivating the markets crucial for the sustenance of small businesses. These endeavors are poised to enhance productivity, drive profits, and generate employment.

Furthermore, the study advocates a departure from reliance on the welfare state, which which may no longer ensure automatic employment for all graduates. The notion of securing salaried positions for all academically trained is deemed unrealistic. Instead, the focus should shift towards supporting existing small businesses to expand and thrive, thereby fostering job creation.

Regarding agriculture, a key alternative economic activity for reconversion, it stands as the cornerstone of Benin's economy and shows promise. Consequently, dedicated research into advancing crop and livestock varieties, coupled with public investments to support storage and facilitate access to local and regional markets, has the potential to serve as a catalyst not only

for Zem operators' reconversion but also for elevating national agricultural productivity and enhancing the living standards of numerous citizens.

Overall, macroeconomic reforms and support for SMEs are vital for employment and inclusive growth.

- Third, participation in the reconversion program could be challenging for the broad success of the reconversion of ZOs. In the line of mechanism design theory, the study suggests outcome-oriented policies and the adoption of an individualistic policy approach, including coercive measures when needed, to make people individually responsible for their reconversion and their lives' transformation. Nonetheless, while outcome-oriented strategies appropriately emphasize individual agency and accountability, pragmatic social safeguards remain important to catch the most vulnerable.

As some operators may struggle during reconversion, careful planning can help all transition successfully. Policymakers should partner with humanitarian groups running anti-poverty initiatives to support those struggling to keep up with the pace of reconversion programmes. This captures the social dimension critical to inclusive planning. As such, community-based organisations and humanitarian actors possessing deep local knowledge and outreach can play a complimentary role in delivering targeted support such as temporary stipends, technical education, job-placement services, and counselling for at-risk groups least equipped to navigate changes independently. Incentive structures can help ensure all voice their perspectives and priorities actively in each phase of reconversion. Incentive structures must also motivate active cooperation from private employers in apprenticeship programmes and formal recruitment.

Periodic progress reviews, involving Zem workers, government implementation units, technical advisors, NGO facilitators, and representatives from growth sectors, would foster joint problem-solving, mid-course corrections, and strategic realignments for enhanced viability, ownership, and sustainability over the long term. Only through such full cooperation across government, industry, and the community can policies emerge that smoothly upgrade opportunities for improved living standards among Zem operators in Cotonou.

For the Zem practitioners

- One significant barrier identified in this study for the transition to self-employment is the lack of access to finance. To address this challenge, Zem operators are encouraged to participate in tontine groups (SACCOs). These groups, when well-structured, not only offer financial support but can also serve as collateral for lending operations with financial institutions. Additionally, Zem operators should leverage land assets by obtaining titles. This not only ensures compliance with government regulations and protection against land grabbers but, more importantly, transforms land into an economic asset—a source of wealth and financial empowerment. Engaging in education and training relevant to the chosen economic activity is crucial for successful reconversion. Participation in training programs, sometimes offered free of charge by NGOs, is particularly beneficial, as the study confirms that educational background significantly contributes to Socio-Economic Well-being
- Considering the future of the Zem activity, it is foreseeable that, in an improved economic environment, Zem may not remain a sustainable mode of transport in Cotonou. Factors such as health risks associated with the trade, operators seeking higher aspirations, and other reasons may lead to the eventual abandonment of the the profession. Therefore, they would be better off being proactive in exploring alternative avenues rather than being reactive too late.
- The results also uncovered that some operators cited age-related concerns as a reason to resist reconversion. Contrary to this perception, there is no age limit for reconversion as long as individuals maintain minimum good health. Zem operators are encouraged to commit to reconversion regardless of age, considering aspects tailored to different age groups, skills, and abilities within the reconversion program. While acknowledging the health risks associated with the Zem occupation, it may be beneficial to explore the implementation of an age and time limit for retirement. In this context, retirement is viewed not as the end of active life but as a transition to a different activity.

6.5. Limitations of the Study

The focus of this study was to look into how the downward trend in the living standards of Zem operators in Cotonou could be reversed through economic reconversion to improve their socioeconomic well-being. In this way, this study contributes to the body of academic knowledge and policy formulation. However, it is not sacrosanct either in the sense that it faced some limitations. One limitation of this study is that some respondents withdrew when a

customer came forward. Although some of these operators returned, in general, the majority never returned to complete their survey. As this phenomenon was to be expected, the study took steps to address it - as evidenced by the satisfactory response rate of 94% - by shortening the questionnaire and the survey duration.

Also, the presidential election in Benin was held in March 2021, at which time most of the fieldwork was completed. As such the overall setting of the data collection process presented some challenges. As result, the research team had to accelerate the survey administration. Owing to Zem operators' practice of handouts from politicians during the electioneering period is another factor of limitation given it influenced their willingness to voluntarily partake in this study. Due to the general atmosphere of the elections, the preparation of the fieldwork took longer than expected. On the one hand, participants were involved in moneymaking electoral activities, and on the other hand, some operators and data collectors made their participation in this study conditional on monetary returns. Whatever the case, a workaround was found to complete the administration of the questionnaires before the actual day of the presidential election.

In other respects, frustrated and upset operators might have distorted their attitudes about their willingness to reconvert and the alternative activity they would consider, thus biasing their responses in favour of what they may have perceived as being more rewarding. To counter it, the researcher probed participants for further details where there were suspicions.

6.6. Suggestions for Further Research

As this study is limited to Zem operators still in activity, further research on the reconversion process undertaken by those who have reconverted and the assessment of their post-conversion living conditions could contribute effectively to the solution of the problems posed by the Zem sector in Cotonou. To this end, agriculture being the alternative economic activity for reconversion, envisaged by most of the operators who expressed their willingness to reconvert, research on the capacity of the Beninese agricultural sector to generate decent and remunerative jobs would be of great value in the reconversion process in Zem industry in Cotonou. Future studies could explore sectors of employment or activity not yet optimised in Benin to provide new employment opportunities for Zem operators wishing to retrain. Last but not least, further research on a larger sample from various sectors of the informal economy is needed to examine market entry conditions, barriers to enterprise creation, self-employment, investment, and so on, to promote the livelihoods of citizens in the informal economy, including Zem operators.

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APPENDICES

APPENDIX I: Informed Consent Form

I am Jean Phil Kabo K. Iroukoura, a PhD student at Tangaza University College in Nairobi, Kenya. I am doing research in the Zem industry on improving the socio-economic ZOSEW in Cotonou. The information from this research will be used in accordance with the commitments I made as part of my PhD studies.

The process

Your participation in this research will consist of answering all the questions in this questionnaire. Your responses will be kept in electronic form and will be used in reflections on how to improve the SEW of Zem operators in Cotonou.

Please note that participation in this research is entirely voluntary. You may also ask any questions you wish. However, you can also decline your interest in participating in this research, at any time, without any risk.

Embarrassment

If you feel embarrassed or uncomfortable with certain questions, don't hesitate to dismiss them. Remember that you can end this survey at any time.

Benefits

Your participation in this research will provide information that can be used in the future to inform Benin decision-making authorities. This information can also serve as a guideline for Zem operators interested in equitable conversion to improve their SEW.

Confidentiality

You may be approached by surveyors during your work, i.e., in traffic or at your resting place, but essentially, outside of peak business hours. Your name will not be included in the questionnaire. All questionnaires from this research will be kept in a secure office at Tangaza University in Nairobi, Kenya.

Participant's Statement

The preceding information regarding my participation in this research is clear and understood. I have had the opportunity to ask questions to which I have received satisfactory answers. I understand that my statements will be kept secret and locked in a safe place. I can also leave the research at any time. There will be no repercussions if I do not participate in this investigation or withdraw at any time.

Name:

Signature or thumbprint: Date

Surveyor's Statement

I, the surveyor, explained to the voluntary participant in this research, in a language that he/she understands, the process to be followed and the implications.

Name:

Signature: Date:

APPENDIX II: Research Approval



TANGAZA UNIVERSITY COLLEGE

The Catholic University of Eastern Africa

DIRECTORATE OF POSTGRADUATE STUDIES & RESEARCH

E-mail: dir.pgsr@tangaza.ac.ke Website: www.tangaza.ac.ke

OUR Ref: DPGSR/ERC/01/2021

Date: 26th January 2021

To Whom It May Concern

Dear Sir/Madam,

Re: Research Permit for KABO KOKOU IROUKOURA

This is to confirm to you that the person named above is a student at Tangaza University College (TUC). He is registered in the Institute for Social Transformation (Reg. No 17/00481) and he is pursuing a degree in Doctor of Philosophy in Social Transformation.

Kabo has met all our provisional academic requirements leading to data collection. However, he cannot proceed to the field before getting a Research Permit from the Directorate of National Scientific and Technical Research (DNRST) branch in Cotonou, Benin. Kindly assist him to process the permit for the same purpose. Thanking you in advance for your cooperation.

Yours sincerely,



Dr. Daniel M. Kitonga (Ph.D.)
Director, Research & Postgraduate Studies

CC:
Dr. Steve A. Ouma – PhD in ST Programme Leader (IST)

APPENDIX III: Research authorisation

REPUBLIQUE DU BENIN
DEPARTEMENT DU LITTORAL
MAIRIE DE COTONOU

N° 13/2021/MCOT/SG/SGA/DSEF/DASEF/SCASP

Cotonou, 26/05/2021



AU

REVEREND FRERE JEAN
PHILIPPE IROUKOURA K.
TÉL : 00 (229) 66549511
COTONOU BENIN

Objet : Autorisation de collecte de données.

Révérend Frère,

J'accuse réception de votre lettre sans référence du 22 mars 2021 par laquelle vous sollicitez une permission pour la collecte des données auprès des conducteurs de taxis-motos « Zémidjan » dans le cadre de la rédaction d'une thèse académique et vous en remercie.

En réponse, je vous autorise à procéder à ladite collecte de données sur toute l'étendue du territoire de la Commune de Cotonou.

En vous souhaitant bonne réception, veuillez recevoir, Cher Révérend Frère, l'expression de mes salutations distinguées.

Pr le Maire et PD

Deuxième Adjoint au Maire, délégataire



Gatien ADJAGBONI



REPUBLIQUE DU BENIN

 DEPARTEMENT DE L'ATLANTIQUE

 COMMUNE D'ABOMEY-CALAVI

Abomey-Calavi, le 12/04/2021

Reçu ce 01/04/2021



Le Maire

A

Monsieur IROUKOUNA Kabo
 (Rév. Frère Jean Philippe)
 Congrégation des Frères du Sacré-Coeur
 Tél : 66 54 95 11
Cotonou

N° 21/ 0620 /C-AC/C-CAB/SC/DSP/SPA/C/SAC

Objet : Autorisation de recherche.

Référence : Votre requête en date du 22 mars 2021.

Monsieur,

Suite à votre requête ci-dessus rappelée en référence, j'ai l'honneur de vous notifier mon accord pour la collecte des données auprès des zem de la commune en vue de finaliser la rédaction d'une thèse académique

A cet effet, vous voudriez bien vous rapprocher donc du Chef de l'Arrondissement d'Abomey-Calavi pour les dispositions utiles à prendre en vue du respect des mesures sanitaires notamment des gestes barrières contre la propagation du coronavirus (Covid 19).

Par ailleurs, vous voudriez bien prendre en liaison avec le Commissaire de l'Arrondissement d'Abomey-Calavi, les mesures nécessaires pour préserver la sécurité des personnes et des biens au cours des collectes.

En tout état de cause, toute atteinte à l'ordre public et / ou tout désordre seront punis conformément aux textes en vigueur.

Veuillez croire, **Monsieur**, à l'assurance de ma considération distinguée.



Le Maire & P.D

Adjointe au Maire

[Signature]

Samy Christelle DAN

Ampliations :

- CA//Abomey-Calavi.....01 pr info
- Com/Arr/Abomey-Calavi.....01 pr mes séc
- Chrono.....01
- Archives02

APPENDIX IV: Questionnaire for Zem operators

Guidelines

1. The surveyor ensures that each Zem operator completes the entire questionnaire during the survey administration.
2. The introduction regarding the purpose and outline of the survey must be done before the interview begins. Clarification regarding the time must be undertaken to make contact with the Zem operator for an appropriate arrangement.
3. All segments must be completed. If the respondent does not answer or cannot answer a question, mark NA for "No Answer" in the spaces provided.
4. At the end of the survey, the researcher must express his gratitude to the Zem operator for his/her support and cooperation.

Name of Surveyor:

Name of place:

Gender of surveyed: Female Male

Date:

Start time:

End time:

Dear Zem operators in Cotonou

I am Jean Philippe Kabo Iroukoura, a PhD student at Tangaza University College in Nairobi, Kenya. I am researching the socio-economic welfare of Zem operators with a view to their conversion. Your voluntary and sincere participation in this research will enable me to make appropriate recommendations to Benin's authorities and policymakers. Please take about 30 minutes to answer the surveyors' questions, who will fill in the questionnaire as you answer the questions.

Thank you.

I- QUESTIONNAIRE FOR ZEM OPERATORS

A- Background Information: Socio-demographic Characteristics

Please write the number corresponding to your choice in the provided area (-----)

1. Gender: 1- *Male* 2- *Female* -----

2. Location: where is your permanent residence location before joining Zem in Cotonou -----

1- *Urban area* 2- *Rural area*

3. Age: how old are you? 1- [18-25] 2- [26-35] 3- [36-45] 4- [46-55] 5- [56-65]

4. Marital Status: 1- *Married* 2- *Single* 3- *Divorced* 4- *Widowed* -----

5. Household size: How many people do you support (in household size)? -----

1- [1-3] 2- [4-6] 3- [7-9] 4- [10-13] 5- [14-16]

6. Working experience: How long have you been in the motorcycle taxi business? -----

1- [1-5] 2- [6-10] 3- [11-15] 4- [16-20] 5- more than 20

7. Profession qualifications:

1- Civil servant	5- Student	-----
2- Employee	6- Apprentice	
3- Craftsman	7- Agriculture	
4- Unemployed graduate	8- No qualification	

8. Are you engaged in any other different income generating-activity beside Zem? 1-Yes 2-No -----

If “Yes”, which one (s)?.....

If “No”, why ?.....

9. Representation of Zem activity. What does Zem profession represent for you?

1- Permanent job from which I live and make my life
2- Temporary employment while looking for a stable job -----
3- Supplement for salary or other sources of income
4- Others: specify.....

10. Education: What is your level of education? -----

1- None 2- Primary 3- Secondary 4- University 5- Other

11. Ownership: Do you own your motorcycle? 1- Yes 2- No -----

12. Driving license. do you have a license to drive your motorcycle? 1- Yes 2- No ----

13. Reconversion: If you are given the opportunity to embrace an alternative income-generating activity would you quit the Zem sector? (Please justify): **1- Yes** **2- No**

14. If your answer is "yes», which other activity are you skilled or qualified to do? (specify).....

In the following sections, please rank your opinion in circling the number that match the best your opinion using the following ranking:
Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)

B- Zem industry' structure: ease of entry

	Rank your opinion on the entry in Zem industry in Cotonou	SD	D	N	A	SA
15.	Affordable access to motorbike by purchase, lease, or entrusted, makes the entry easy.	5	4	3	2	1
16.	The affordability of registration formalities for Zem business operation makes the entry into the industry easy	5	4	3	2	1
17.	Zem operators and investors find it easy and costless to exit from Zem industry	5	4	3	2	1
18.	The continual number of new entrants in the Zem industry is very high	5	4	3	2	1
19.	It is easy for new operators to enter and compete in Zem industry	5	4	3	2	1

C- Section on Education

	Rank your opinion on education	SD	D	N	A	SA
20.	My academic education has helped me in conducting Zem business in terms of interpersonal skills	5	4	3	2	1
21.	My business skill has helped me better identify unmet needs in the market	5	4	3	2	1
22.	My managerial skill has helped me better manage my income	5	4	3	2	1
23.	My academic education has enabled me to diversify my source of income	5	4	3	2	1
24.	My academic education has enabled me to keep abreast with what is happening or predicted in the Zem business sector	5	4	3	2	1

D- Section on Regulation

	<i>Rank your opinion on the regulation of business in Benin.</i>	SA	A	N	D	SD
25.	In addition to financial and technical suitability and compliance with safety requirements, a permit from the regulatory authority is also required to carry out the Zem activity in Cotonou.	1	2	3	4	5
26.	The process of starting the Zem activity in Cotonou takes a long time	1	2	3	4	5
27.	The amount of taxes and fees to be paid annually or monthly is high (which limits my entrepreneurial initiatives)	1	2	3	4	5
28.	Local and national governments offer special support to people who want to start a different new business.	1	2	3	4	5
29.	In the past, there have been decisions or projects aimed at reducing and limiting the number of operators in the Zem sector in Cotonou.	1	2	3	4	5

30. Assuming such a decision (in N°39) resurfaces, how do you plan to anticipate ensuring a more stable source of income?

.....

E- Section on access to credit

31. By what financial means did you acquire your motorbike? Through: -----

1- Access to credit 2- Loan 3- Credit purchase 4- Hire-purchase.

Si l'avez acquise par autre moyen que l'accès au crédit financier, alors classer votre opinion sur les affirmations suivantes relative à l'accès au crédit.

	<i>Rank your opinion about Zems' access to credit</i>	SA	A	N	D	SD
32.	I lack collateral to access the bank loan	5	4	3	2	1
33.	I lack information on the formalities for accessing credit	5	4	3	2	1
34.	The repayment interest rate is too high for me	5	4	3	2	1
35.	I cannot cope with the loan repayment terms	5	4	3	2	1
36.	The bribe to facilitate access to credit limits my access to credit	5	4	3	2	1
37.	It's not easy for me to get credit to start another business	5	4	3	2	1

F- Section on Socio-economic well-being

F1 – Income Level

38. How much do you estimate your average monthly earnings are?

1- Less than 25000 2- [25000 – 50000] 3- [50000 – 75000] 4- [75000 -100000] 5- More than 100000

39. How much taxes and fees do you pay: per month? per year ?

40. How much are your expenses on average? monthly: annual:

41. How easy is it for you to make ends meet with your daily or monthly income?

1- Very Difficult 2- Difficult 3- Neutral 4-Easy 5- Very Easy

Circle the number representing the level of satisfaction with your activity in recent years:

1- Very Decreasing (VD) 2- Decreasing (D) 3- the same (S) 4- Increasing (I) 5- Very Increasing (VI)

		VI	I	S	D	VD
42.	The number of daily trips in my Zem activity is ...	1	2	3	4	5
43.	The number of my regular customers is ...	1	2	3	4	5
44.	The average price of the trip over the last years is ...	1	2	3	4	5
45.	The income from my Zem activity is ...	1	2	3	4	5

F2- Saving

46. How easy or difficult is it to save money from your business income?

1- Very Difficult 2- Difficult 3- Neutral 4-Easy 5- Very Easy

47. How much do you save on average: per week: per week? ----- per month? ----- FCFA

48. Has the amount of your savings increased or decreased over time?

1- Highly decreased 2- Moderately decreased 3-Neutral 4- Moderately increased 5- Highly increased -----

49. What are your reasons for saving? 1- Invest in other income-generating activities. -----

2- Santé 3- Children education 4- Old age pensions 5- others (specify)
.....

50. What achievements you have been able to achieve thanks to the income from your Zem activity?

- 1- *Purchase of land* 2- *Construction of houses*
3- *Purchase of other motorcycles entrusted to third parties* -----
4- *Children education*
5- *Others:*

F3- Health care

51. Are you covered by health insurance? 1- *Yes* 2- *No.* -----

52. If "No", specify your alternative. In the event of illness or injury, I resort to: -----

- 1- *My own funds (savings)* 2- *Debt* 3- *Family support* 4- *Others (specify):*
.....

53. Rank your opinion on the claim that Zems are exposed to respiratory diseases, back pain and others, from air pollution and from sitting on the motorcycle for long periods of time.

- 1- *Strongly Agree* 2- *Agree* 3- *Neutral* 4- *Disagree* 5- *Strongly Disagree.* -----

54. Riding motorbike-taxi affects my health: 1- *Strongly Agree* 2- *Agree* -----

- 3- *Neutral* 4- *Disagree* 5- *Strongly Disagree*

55. Over time, covering my health costs with income from my activity becomes:

- 1- *Very difficult* 2- *Difficult* 3- *Neutral* 4- *Easy* 5- *Very easy* -----

F4 – Old age pension

56. After how many years of Zem activity, do you plan to retire? -----

- 1- 1-5 2- 6-10 3- 11-15 4- 16-20 5- 21-25

57. How old will you be then? 1- 20-29 2- 30-39 3- 40-49 4- 50-59 5- 60-69 -----

58. Are you affiliated with the National Social Security Fund (CNSS) 1-Yes 2- No -----

59. If NO, are you affiliated with any other retirement benefits schemes? (specify)

- 1- *Yes* 2- *No* -----

60. If No to both 59 and 60, would you have saved enough for the rest of your life?

- 1- *Yes* 2- *No* -----

61. In case you would not have saved enough for the rest of your life, what other source(s) of income will you engage in? (Specify):.....

62. Give the reasons why you cannot start now before retirement, this or these alternative activities that you mentioned in the previous question. Justify please:
.....

Thank you for your interest in participating in this research

APPENDIX V: Interview Guide for Key Informants

My name is Jean Phil Kabo K. Iroukoura, a doctoral student at Tangaza University in Nairobi, Kenya. I am researching the strategy to improve the socio-economic welfare of Zem operators in Cotonou, Benin. You are participating in this interview for your knowledge on Zem issues, the employment question in Benin, or any other information that you can provide to add to this research. By doing so, you will help me contribute to Benin competent authorities in improving the organization of the Zem market and the SEW of the citizens. The information you provide will be treated with the utmost confidentiality and used solely for this study. Please, feel free to participate voluntarily in this study. The suspension of your participation is also open and without any risk. If you wish to contact me after this interview for any reason, please feel free to call me at the following numbers:

- Benin: (+229) 66 54.95.11
- Togo: (+228) 99.46.22.43
- Kenya: (+254) 786 30.20.30

May I get to know you better, please?

Now, would you allow me to continue this interview with you?

APPENDIX VI - KI' interview guide: members of Zem unions

Personal details

Name: (optional)

Gender: male Femme.....

Organization

Position in the organization

Questions

1. What do you think of the number of people operating Zem business in Cotonou?
2. What are the highest levels of education among Zem operators?
How does the level of education affect
 - Zem operators' living conditions in Cotonou?
 - Zem operators' possible reconversion to alternative activities?
3. Does business regulation in Benin allow Zem operators to invest in other businesses?
4. How do you assess the access of Zem operators to finance (credit)?
 - Can access to credit free them from dependence on Zem activity?
5. - What is the effects of the high number of Zem operators on the income in the sector?
 - How much does a Zem earn per day, week, or month?
 - How has the income in the sector progressed over time (increasing, decreasing, the same)?
6. - Do Zem operators save money from their Zem activity?
 - How much per day, week, or month?
 - What are the reasons for them to save money from their income?
 - Are Zem operators members of saving groups?
7. Do Zems contribute to the National Social Security Fund (CNSS) for their old age? Y/N?
Do they contribute to another pension scheme? Which one?

8. Are you aware of projects initiated for Zem reconversion in Benin?
9. - Is it realistic to consider reducing and limiting the number of Zems in Cotonou?
- What would be the alternative employment for the victimized?
 - What would you suggest for the successful reconversion of Zems in Cotonou?
10. - How does congestion in the sector impact the ZOSEW,
in terms of savings, health care and old-age pension?
- What is the primary sustainable indicator of SEW, among the
following indicators: Income - savings - Health care – Old-age pension
 - If health is the most sustainable element among the indicators presented, how do Zem
operators relate to disease associated with air pollution in Cotonou, considering their
almost everyday exposure?

APPENDIX VII – KI interview guide: ex-Zem operators reconverted

Personal details

Name: (optional)

Gender: male Femme.....

Organization

Position in the organization

Questions

1. What do you think of the number of people operating Zem business in Cotonou?
2. What are the reasons behind your decision to quit the Zem activity for the new one?
3. How did you manage to reconvert to this new activity?
4. How much do you earn in your current alternative activity? (Compare to Zem income)
5. Does your current income source add to your SEW (income, saving, health care, old-age pension): satisfied, unsatisfied, somehow satisfied?
6. How did business regulation favour your insertion in your reconversion activity?
7. What would you suggest for successful reconversion of the Zem operators in Cotonou?

APPENDIX VIII - KI interview guide: civil society and governments representatives

Personal details

Name: (optional)

Gender: male Femme.....

Organization

Position in the organization

Questions

1- What do you think of the number of operators in Cotonou and its effect on income?

2- How can the profit level in the market be improved?

3- Do you think education/training can influence Zem operators' living conditions?

4- Is there any business regulation that favours Zem operators in Cotonou?

5- Do Zem operators have access to credit?

6- Do Zem operators have access to the Pension scheme in Benin?

7- Is it realistic to consider reducing and/or limiting the number of Zems in Cotonou?

8- what would be the alternatives in terms of employment for the layoffs

9- How can Youth Enterprise Development Agency (ADEJ) and National Employment Agency (ANPE) assist the excluded operators from the Zem industry?

APPENDIX I-B: Formulaire de consentement éclairé

Je m'appelle Jean Philippe Kabo K. Iroukoura, doctorant au Tangaza University College de Nairobi, Kenya. J'effectue des recherches dans l'industrie de Zem sur la manière d'améliorer le bien-être socio-économique des opérateurs de Zem à Cotonou. Les informations de cette recherche seront utilisées conformément aux engagements que j'ai pris dans le cadre de mes études pour l'obtention du PhD.

Le processus

Votre participation à cette recherche consistera à répondre à toutes les questions de ce questionnaire. Vos réponses seront conservées sous forme de saisie électronique et serviront dans le cadre de réflexions sur la manière d'améliorer le bien-être socio-économique des opérateurs de Zem à Cotonou.

Veuillez noter que la participation à cette recherche est entièrement volontaire. Vous pouvez également poser toutes les questions que vous souhaitez. Vous pouvez cependant aussi décliner votre intérêt à participer à cette recherche à tout moment, si vous le souhaitez, et cela sans aucun risque.

Embarras

Si vous vous sentez embarrassé ou mal à l'aise face à certaines questions, n'hésitez pas à les écarter. Rappelez-vous que vous pouvez à tout moment mettre fin à cette enquête.

Avantages

Votre participation à cette recherche permettra d'obtenir des informations qui pourront être utilisées à l'avenir pour éclairer les des autorités de décision du Bénin. Ces informations pourront servir aussi de principes directeurs pour guider les opérateurs de Zem intéressés par une reconversion équitable dans le but d'améliorer de leur bien-être socio-économique

Confidentialité

Vous pourriez être approché par les enquêteurs au cours de votre de travail, c'est--dire en circulation ou dans vos lieux de repos, mais essentiellement, en dehors des heures de pointe dans le business. Votre nom ne sera pas inscrit sur le questionnaire. Tous les questionnaires de cette recherche seront conservés dans un bureau sécurisé de l'Université Tangaza de Nairobi, au Kenya.

Déclaration du participant

Les informations précédentes relatives à ma participation à cette recherche sont claires et comprises. J'ai eu l'occasion de poser des questions auxquelles j'ai reçu des réponses satisfaisantes. Je comprends que mes déclarations seront gardées secrètes et enfermées dans un endroit sûr. Je peux également quitter la recherche à tout moment. Il n'y aura aucune répercussion si je ne participe pas à cette enquête, ou si je me retire quand je le souhaite.

Nom:

Signature ou empreinte du pouce : Date

Déclaration de l'enquêteur

Je, l'enquêteur..... , ai expliqué au participant volontaire à cette recherche, dans une langue qu'il comprend bien, le processus à suivre ainsi que les tenants et aboutissants de cette recherche.

Nom :

Signature : Date :

APPENDIX IV-B: Questionnaire pour les opérateurs de Zem

Directives

1. L'enquêteur s'assure que chaque opérateur Zem remplit le questionnaire en entier lors de l'administration de l'enquête.
2. L'introduction concernant le but et les grandes lignes de l'enquête doit être faite avant le début de l'entretien. Une clarification concernant le temps doit être faite pour prendre contact avec l'opérateur de Zem pour un arrangement approprié.
3. Tous les segments doivent être complétés. Si l'enquêté ne répond pas ou ne peut pas répondre à une question, indiquez NA pour "Pas de réponse" dans les espaces prévus à cet effet.
4. A la fin de l'enquête, le chercheur doit exprimer sa gratitude à l'opérateur Zem pour son soutien et sa coopération.

Nom de l'enquêteur :

Nom du lieu :

Sexe de l'enquêté : Femme Homme

Date :

Heure de début :

Heure de fin :

Chers opérateurs de Zem à Cotonou

Je suis Jean Philippe Kabo Iroukoura, doctorant au Tangaza University College à Nairobi, Kenya. Je fais une recherche sur le bien-être socio-économique des opérateurs de Zem avec une perspective de reconversion. Votre participation volontaire et sincère à cette recherche me permettra de faire des recommandations appropriées aux autorités et décideurs politiques du Bénin.

Veuillez prendre environ 30 minutes pour répondre aux questions des enquêteurs qui rempliront le questionnaire au fur et à mesure que vous répondrez aux questions.

Je vous remercie.

A- Informations générales : caractéristiques sociodémographiques

Veuillez inscrire le numéro correspondant à votre choix dans la zone prévue à cet effet. (-----)

1. **Sexe :** 1- Homme 2- Femme 3- Autre -----

2. **Milieux :** dans quel milieu avez-vous grandi avant de rejoindre avant d'arriver à Cotonou ?
1- Milieu urbain 2- Milieu rural -----

3. **Age :** quel est votre âge ? 1- [18-25] 2- [26-35] 3- [36-45] 4- [46-55] 5- [56-65]

4. **État matrimonial :** êtes-vous : 1- Marié 2- Célibataire 3- Divorcé 4- Veuf -----

5. **Taille du ménage :** Combien y a-t-il de personnes sous votre toit, dépendantes de vous ?
1- [1-3] 2- [4-6] 3- [7-9] 4- [10-13] 5- [14-16]

6. **Expérience professionnelle :** Depuis combien de temps êtes-vous dans l'activité Zem ? -
1- [1-5] 2- [6-10] 3- [11-15] 4- [16-20] 5- plus de 20

7- **Profession / qualifications :**

1- Fonctionnaire/Salarié	5- Etudiant / Elève	-----
2- Employé	6- Apprenti	
3- Artisan	7- Agriculteur	
4- Diplômé chômeur	8- Sans qualification	

8. Êtes-vous engagé dans une autre activité génératrice de revenus à part Zem ? 1-Oui 2-Non

Si oui, lesquelles ?

Si non pourquoi ?

9. **Représentation de l'activité Zem.** Que représente cette activité pour vous ?

1- Emploi permanent
2- Emploi temporaire tout en recherchant un emploi stable -----
3- Supplément de salaire ou d'autres sources de revenus
4- Autres :

précisez.....

10. **Formation académique :** quelle est votre plus haut niveau scolaire ?

1- Aucune 2- Primaire 3- Secondaire 4- Universitaire 5- Autres. -----

11. **La Propriété de la moto :** êtes-vous propriétaire de votre moto ? 1- Oui 2- Non -

12. **Permis de conduire :** détenez-vous un permis pour conduire votre moto ? 1-Oui 2-Non -

13. **Reconversion :** Si vous avez l'opportunité de vous reconvertir à d'autres autres activités génératrices de revenus, quitteriez-vous le secteur du Zem ? 1-Oui 2- Non -----
Justifiez, s'il vous plait.....

14. Activités alternatives : Si oui à la question 13, quelles autres activités êtes-vous en mesure d'embrasser ?
(Spécifier).....

Dans les sections suivantes, veuillez classer votre opinion en encerclant le nombre qui correspond à votre opinion sur la base d'une échelle de 5-Likert :

1- Pas du tout d'accord 2- En désaccord 3- Neutre 4- D'accord 5- Tout à fait d'accord

B- Structure de l'industrie Zem à Cotonou : facilité d'entrer

	<i>Classez votre opinion sur « l'entrée » dans l'industrie de Zem à Cotonou</i>	PDTD	PD	N	D	TAFD
15.	L'accès abordable à la moto soit par achat, location, ou confiée par un ami ou un parent, rendent l'entrée facile, dans l'industrie de Zem.	1	2	3	4	5
16.	L'abordabilité des formalités d'enregistrement pour l'exploitation commerciale de Zem facilite l'entrée dans l'industrie	1	2	3	4	5
17.	Les opérateurs de Zem ainsi que les investisseurs trouvent qu'il est facile et peu coûteux de sortir de l'industrie de Zem	1	2	3	4	5
18.	L'entrée continue de nouveaux entrants dans l'industrie est très élevée	1	2	3	4	5
19.	Il est facile pour les nouveaux opérateurs d'entrer et de rivaliser les opérateurs établis.	1	2	3	4	5

C- Section sur l'éducation et la formation

	<i>Classer votre opinion sur l'éducation et la formation</i>	PDTD	PD	N	D	TAFD
20.	Ma formation universitaire m'a aidé à mener des affaires Zem en termes de compétences	1	2	3	4	5
21.	Mes compétences en affaires m'ont aidé à mieux identifier les besoins non satisfaits sur le marché	1	2	3	4	5
22.	Mes compétences managériales m'ont aidé à mieux gérer mes revenus	1	2	3	4	5
23.	Ma formation universitaire m'a permis de diversifier ma source de revenus	1	2	3	4	5
24.	Ma formation académique m'a permis de me tenir au courant de ce qui se passe ou prédit dans le secteur des affaires de Zem	1	2	3	4	5

D- Section sur la Réglementation

	<i>Classer votre opinion sur la réglementation des affaires au Bénin</i>	PDTD	PD	N	D	TAFD
25.	Outre l'aptitude financière et technique et le respect des exigences de sécurité, un permis de l'autorité de réglementation est aussi nécessaire pour exercer l'activité Zem à Cotonou	1	2	3	4	5
26.	Le processus de démarrage de l'activité Zem à Cotonou prend long temps	1	2	3	4	5
27.	Le montant des taxes et frais à payer annuellement ou mensuellement est élevé (ce qui limite mes initiatives entrepreneuriales)	1	2	3	4	5
28.	Les gouvernements locaux et nationaux offrent un soutien spécial aux personnes qui souhaitent créer une nouvelle entreprise.	1	2	3	4	5

29.	Il y a eu par le passé des décisions ou projets visant à réduire et limiter le nombre d'opérateurs dans le secteur du Zem à Cotonou.	1	2	3	4	5
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30. Supposant qu'une telle décision refasse surface, comment prévoyez-vous d'anticiper pour vous assurer une source de revenus plus stable ?.....

E- Section sur l'accès au crédit

31. Par quels moyens financiers avez-vous acquis votre moto ? Par : -----
1- accès au crédit 2- emprunt 3- achat à crédit 4- location-vente.

Si l'avez acquise par autre moyen que l'accès au crédit financier, alors classer votre opinion sur les affirmations suivantes relative à l'accès au crédit.

	<i>Classer votre opinion à propos de l'accès des Zems au crédit</i>	PDTD	PD	N	D	TAFD
32.	Je manque de garantie pour accéder au prêt bancaire	1	2	3	4	5
33.	Je manque d'informations sur les formalités d'accès au crédit	1	2	3	4	5
34.	Le taux d'intérêt du remboursement est trop élevé pour moi	1	2	3	4	5
35.	Je ne peux pas faire face aux conditions de remboursement du prêt	1	2	3	4	5
36.	Le pot-de-vin pour faciliter l'accès au crédit limite mon accès au crédit	1	2	3	4	5
37.	Ce n'est pas facile pour moi d'obtenir du crédit pour créer une autre activité	1	2	3	4	5

F- Section on Socio-economic well-being

F1 – Le niveau de revenu

38. A combien estimez-vous vos gains mensuels moyens ? -----
1- moins de 25000 2- [25000 – 50000] 3- [50001 – 75000] 4- [75001 -100000] 5- > 100000

39. Payez-vous des impôts et redevances? 1-Oui 2-Non -----

40. Combien en taxes et autres frais payez-vous : par mois ?..... par an ? (en Fcfa)

41. A combien s'élèvent vos dépenses en moyenne : par mois ?..... par an ? (en Fcfa)

42. Comment est-il facile ou difficile pour vous de joindre les deux bouts avec vos revenus quotidiens ou mensuels ? 1- Très facile 2- Facile 3- Neutre 4- Difficile 5- Très Difficile -----

Encercler le chiffre représentant le niveau de satisfaction de votre activité au cours des dernières années : **1- Très Décroissant (TD)** **2- Décroissant (C)** **3- Le même (LM)** **4- Croissant (C)** **5- Très Croissant (TC)**

	<i>Evolution de votre activité au cours des dernières années</i>	TD	D	LM	C	TC
43.	Le nombre de trajets quotidiens dans mon activité de Zem est ...	1	2	3	4	5
44.	Le nombre de mes clients réguliers est ...	1	2	3	4	5
45.	Le prix moyen du trajet au cours des 3 dernières années est ...	1	2	3	4	5
46.	Le revenu de mon activité Zem est ...	1	2	3	4	5

F2- Epargne

47. Comment est-il facile ou difficile d'épargner à partir du revenu de votre activité ?

1- Très facile **2- Facile** **3- Neutre** **4-Difficile** **5- Très Difficile** -----

48. Combien épargnez-vous en moyenne : *par semaine ?* ----- *par mois ?* ----- (en FCFA)

49. Le montant de vos épargnes a-t-il augmenté ou diminué au fil du temps ?

1-Assez augmenté **2-Moyennement augmenté** **3-Neutre** **4-Légèrement diminué** **5-Assez diminué**

50. Quels sont vos objectifs d'épargner ? **1- Investir dans d'autres activités** **2- Santé** ----
3- éducation des enfants **4- Pensions de vieillesse** **5- Autres**
 (préciser).....

51. Quelles sont les réalisations que vous avez pu faire grâce au revenu de votre activité ?

1- achat de terrain (terrain recasé, non recasé). **2- construction de maisons.**

3- achat d'autres motos confiées aux tierces. **4- scolarisation des enfants.**

5- Autres :

F3- Soins de santé

52. Êtes-vous couvert par une assurance maladie ? **1- Oui** **2- Non** -----

53. Si votre réponse est « NON », précisez en cas de maladie ou d'accident, à quels moyens recourez-vous pour vous soigner ? -----

1-Mes fonds propres **2-Eendettement** **3-Soutien familial** **4-Autres (précisez) :**

54. Classez votre opinion sur l'assertion selon laquelle les Zems sont exposés à des maladies respiratoires, aux maux de dos et autres, en raison de la pollution de l'air et de la position assise sur la moto pendant de longues périodes. **1- Tout à fait d'accord** **2- D'accord** **3- Neutre** **4- En désaccord** **5- Pas du tout d'accord** -----

55. La pratique de l'activité de taxi-moto affecte ma santé :

1-*Fortement d'accord* 2-*D'accord* 3-*Neutre* 4-*En désaccord* 5-*Fortement en désaccord* -----

56. Au cours du temps, la couverture de mes frais de santé grâce au revenu de mon activité devient : 1-*Très facile* 2-*Facile* 3-*Neutre* 4-*Difficile* 5-*Très difficile* -----

F4 – Old age pension

57. Après combien d'années d'activité Zem envisagez-vous de prendre votre retraite ? -----

1- 1-5 2- 6-10 3- 11-15 4- 16-20 5- 21-25

58. Quel âge aurez-vous alors ? 1- 20-29 2- 30-39 3- 40-49 4- 50-59 5- 60-69 -----

59. Êtes-vous affilié à la Caisse Nationale de Sécurité Sociale ? 1- Oui 2- Non -

- Si votre réponse est "Oui" alors, merci pour votre contribution à cette enquête.

Bonne bonne chance dans vos affaires !

- Si c'est Non, justifiez ?

(poursuivre à la question 60)

60. Êtes-vous affilié à un autre régime de retraite ? 1- Oui 2- Non -----

- Si Oui, le(s) Quelle (s) ?

- Si "Non", auriez-vous économisé assez pour le reste de votre vie ? 1-Oui 2- -----

61. Au cas où vous n'aurez pas épargné suffisamment pour le reste de votre vie, dans quelles autres sources de revenus vous engageriez-vous ? (Spécifier)

62. Donnez les raisons pour lesquelles vous ne pouvez pas commencer maintenant avant votre retraite, cette ou ces activités alternatives que vous avez mentionnées à la question précédente. (Justifiez s'il vous plait) :

Merci de votre intérêt à participer à cette recherche

APPENDIX V-B: Guide d'entretien avec les informateurs clés

Je m'appelle Jean Phil Kabo K. Iroukoura, doctorant à l'Université Tangaza de Nairobi, au Kenya. Je fais des recherches sur la stratégie d'amélioration du bien-être socio-économique des opérateurs de Zem à Cotonou, au Bénin. Vous participez à cette interview pour vos connaissances sur la problématique Zem, la question de l'emploi au Bénin, ou toute autre information que vous pouvez fournir pour enrichir cette recherche. Ce faisant, vous m'aiderez à apporter une contribution aux autorités compétentes du Bénin en vue d'améliorer l'organisation du marché du Zem et le bien-être socio-économique des citoyens. Les informations que vous fournirez seront traitées avec la plus grande confidentialité et utilisées uniquement pour cette étude. S'il vous plaît, n'hésitez pas à participer volontairement à cette étude. La suspension de votre participation est également ouverte et sans aucun risque. Si vous souhaitez me contacter après cet entretien pour quelque raison que ce soit, n'hésitez pas à m'appeler aux numéros suivants:

- Bénin : (+229) 66 54.95.11
- Togo : (+228) 99.46.22.43
- Kenya : (+254) 786 30.20.30

Puis-je mieux vous connaître, s'il vous plaît ?

Maintenant, me permettez-vous de poursuivre cet entretien avec vous ?

APPENDIX VI-B : Guide d'entretien avec bureau des syndicats de Zem

Informations Personnelles

Nom: (optionnel)

Genre : Masculin Féminin.....

Organisation

Position dans l'organisation

Informations principales

1. Que pensez-vous du nombre de personnes qui exploitent l'entreprise Zem à Cotonou ?
2. Quels sont les niveaux d'éducation les plus élevés parmi les opérateurs Zem ?
Quelle l'influence aurait les niveaux d'instruction sur :
 - les conditions de vie des opérateurs Zem à Cotonou ?
 - sur la reconversion des opérateurs Zem vers des activités alternatives ?
3. La réglementation des affaires au Bénin permet-elle aux opérateurs Zem d'investir dans d'autres entreprises ?
4. - Comment évaluez-vous l'accès des opérateurs Zem au financement (crédit) ?
- L'accès au crédit peut-il contribuer à les libérer de la dépendance à l'activité de Zem ?
5. - Quels sont les effets du nombre pléthorique d'opérateurs sur les revenus dans le secteur ?
- Combien gagne un Zem par jour, par semaine, ou par mois ?
- Quel est l'évolution du revenu dans le temps (augmentation, diminution, idem) ?
6. - Les opérateurs Zem épargnent-ils de l'argent sur le revenu de leur activité Zem ?
- Combien épargnent-ils par jour, semaine, ou mois ?
- Quelles sont les raisons pour lesquelles ils épargnent de l'argent ?
- Les opérateurs Zem sont-ils membres de groupes d'épargne ou de crédit ?
7. Les Zems cotisent-ils à la Caisse Nationale de Sécurité Sociale (CNSS) pour leurs vieux jours (Oui/Non) ? Cotisent-ils à un autre régime de retraite ? Lequel ?
8. Avez-vous connaissance ou souvenir de projets de reconversion des opérateurs de Zem Initiés pour au Bénin ?
9. - Est-il réaliste d'envisager de réduire et de limiter le nombre de Zems à Cotonou ?
- Quel serait les secteurs d'emplois alternatifs pour les victimes d'une telle opération?
- Que proposeriez-vous pour une reconversion réussie des opérateurs Zems à Cotonou ?

10. - Comment la congestion du secteur impacte-t-elle sur le bien-être socio-économique des opérateurs Zem, en termes d'épargne, de soins de santé et de pension de vieillesse ?
- Quel est le principal indicateur durable du bien-être socio-économique, parmi les éléments suivants : Revenus - Épargne - Soins de santé - Pension de vieillesse
 - Si la santé est l'élément le plus durable parmi les indicateurs présentés, quelle est l'attitude des opérateurs de Zem vis-à-vis des maladies liées à la pollution de l'air à Cotonou, du fait de leur exposition presque quotidienne à la pollution de l'air ?

APPENDIX VII-B : Guide d'entretien - ex-opérateurs de Zem reconvertis

Informations Personnelles

Nom: (optionnel)

Genre : Masculin Féminin.....

Organisation

Position dans l'organisation

Informations principales

1. Que pensez-vous du nombre de personnes qui opèrent dans l'industrie de Zem à Cotonou ?
2. Quelles sont les raisons de votre décision de quitter l'activité Zem?
3. Comment avez-vous réussi à vous reconverter dans votre nouvelle activité ?
4. Combien gagnez-vous actuellement comparé à vos revenus dans l'activité de Zem ?
5. Votre activité actuelle contribue-t-elle mieux à votre revenu annuel, votre épargne, vos soins de santé, et vous permet-elle de cotiser pour vos vieux jours (veuillez apprécier en termes de satisfait, insatisfait, en quelque sorte satisfait) ?
6. La réglementation des affaires a-t-elle favorisé votre insertion dans votre activité de reconversion ?
7. Que proposeriez-vous pour une reconversion réussie des opérateurs de Zems à Cotonou ?

APPENDIX VIII-B : Guide d'entretien - société civile et fonctionnaires d'Etat

Informations Personnelles

Nom: (optionnel)

Genre : Masculin Féminin.....

Organisation

Position dans l'organisation

Informations principales

- 1- Que pensez-vous du nombre d'opérateurs à Cotonou et de son effet sur les revenus ?
- 2- Comment améliorer le niveau de profit sur le marché ?
- 3- Pensez-vous que l'éducation/formation peut exercer une influence sur les conditions de vie des opérateurs Zem ?
- 4- Existe-t-il une réglementation des affaires qui favorise les opérateurs Zem à Cotonou ?
- 5- Les opérateurs Zem ont-ils accès au crédit ?
- 6- Les opérateurs Zem ont-ils accès au Régime de Retraite au Bénin ?
- 7- Est-il réaliste d'envisager de réduire et/ou de limiter le nombre de Zems à Cotonou ?
- 8- quelles seraient les alternatives en termes d'emploi pour les victimes d'une telle réduction ?
- 9- Comment l'Agence de Développement de l'Entrepreneuriat des Jeunes (ADEJ) et l'Agence Nationale Pour l'Emploi (ANPE) peuvent-elles aider les opérateurs victimes d'une quelconque opération de réduction d'effectif dans l'industrie du Zem à Cotonou?

APPENDIX IX: Measurement of variables

Measurement of Variables

Objectives	Type of Variable	Hypothesis	Source of data	Analysis
To establish the influence of ease of entry on the SEW	IV	Ease of entry has not significant influence on SEW	Questionnaire: (Likert scale) Key informants Interview	Descriptive Multiple Regression
To examine the influence of educational background on the SEW	IV	Educational background has no significant influence on SEW	Questionnaire: (Likert scale) Key informants Interview	Descriptive Multiple Regression
To determine the influence of Business regulation on the SEW	IV	Business regulation has no significant influence on SEW	Questionnaire: (Likert scale) Key informants Interview	Descriptive Multiple Regression
To establish the influence of Access to finance on the SEW	IV	Access to finance has no significant influence on SEW	Questionnaire: (Likert scale) Key informants Interview	Descriptive Multiple Regression
To explore how ZOs can reconvert to boost their income and SEW	V	--	Key informants Interview Secondary data	Thematic analysis
Socio-economic well-being	DV	--	-Questionnaire: (Likert scale) Key informant Interview	Descriptive Analysis

APPENDIX X

Administrative map of Republic of Benin



Source: Google Map

APPENDIX XI

Map of Cotonou, the Economic Capital City of the Republic of Benin



Source: Google Map