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Industrial Policy in Context; Comparative Experiences from Chile and Zambia

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This article tries to draw lessons from Chile for Zambia on innovative industrial policy and strategies that lead to industrial transformation and job creation. The creation of quality jobs for the increasingly skilled youth requires significant efforts. Industrial policy has been argued to have the potential to contribute to the creation of employment through support for new and old initiatives in the economy. In the case of Zambia, the economy has mainly been dominated by the mining sector, where the creation of jobs has been very small, whereas the comparator country Chile developed an institutional framework for industrial policy that addressed market failures and encouraged innovation concentrated in specific sectors. These were attainable given the country's existing or potential comparative advantage and therefore had strong growth prospects and impacted on job creation. The study finds that Chile provides a rich experience that Zambia can learn from in creating labour intensive job opportunities especially for youths.

Keywords:

Industrial policy, youth unemployment, industrial growth, state ownership, agribusiness, employment creation

Introduction

Zambia saw robust growth and increased Foreign Direct Investment (FDI) inflows during the first fourteen years of this century. In contrast, employment creation has been sluggish. Unemployment remained high, averaging 15% (World Bank, 2014). New jobs were only being created in the informal sector. In 2014, the informal sector comprised 89.3% of total employment. Youth unemployment remained high, estimated at 26% (World Bank, 2014). The large and growing youthful population continues to pose serious socio-economic challenges. Therefore, there is need to create sufficient jobs to absorb the increasing number of youths who will be seeking jobs. The creation of high quality jobs for the youth requires significant innovative efforts by policymakers.

The rationale for the use of innovative industrial policy for job creation and structural transformation is robust. Industrial policies that support a

range of activities increase the potential for structural transformation and the creation of more jobs (Rodrik, 2010). This is exhibited by the decline of low-productivity agriculture and low value added extractive activities, and a relative increase in manufacturing and high-productivity services sectors. Despite failed industrialisation in Sub-Saharan Africa, evidence from Chile shows that the State is critical in influencing an industrialisation process that creates jobs.

The question that arises is how Chile supported specific sectors of the economy, while at the same time avoiding the risk of creating “white elephants”. The purpose of this paper is to draw experiences from Zambia and Chile on innovative industrial policy and strategies that can lead to industrial transformation and job creation. It looks at an industrial policy and strategy that focuses on job creation and the role of the State. The rest of the paper is organised as follows. Section 2 provides the methodological motivation. Employment and industrial growth are presented in Section 3 and 4 respectively. Section 5 looks at the overview of Zambia’s industrial policy. Key sectors are identified in Section 6, while the comparative experiences from Chile are drawn in Section 7. The conclusion of the paper is in Section 8.

Methodological Motivation

Industrial policy is a set of measures and strategies that promote structural change. Broadly, “industrial policies refer to restructuring policies in favour of more dynamic activities generally, regardless of whether those are located within industry or manufacturing per se” (Timmer et al, 2012). These policies and strategies can transform an economy from primary production to value added and diversified production. To increase productivity and create jobs, industrial policies and strategies must not only concentrate on exploiting a country’s comparative advantage, but must also support a range of activities that will stimulate development and promote the creation of new jobs (Rodrik, 2010).

To create dynamic industrial growth, industrial policy and strategy must meet three core principles (observed from successful countries) that form our analytical framework (Rodrik, 2010). Firstly, a state of mind rather than outlines of objectives: Industrial policy has to be an interactive process between the State and private businesses to create “social capital” conducive to investment. This embedment of the State in the private sector is essential for sharing ideas necessary for the State to improve its selective and functional policy interventions for the private sector to flourish (Ndulo, 2015). The high-level interaction between the State and private actors helps in identifying the requisite State interventions that largely depend on the level of development and nature of the industry. For this to succeed active policies are required that

provide incentives, direction, and coordination within policy makers and the private sector; and between them.

Secondly, a successful industrial policy should be anchored on special incentives that have well defined access rules and output indicators (Rodrik, 2010). The strategy must be to provide a combination of incentives and compulsion. This suggests that incentive systems for new investors must be temporary and optional. Failure to meet their objectives must attract punishment. The intensity of such carrots and sticks could differ across industry and over time depending on government policy. Several incentives ranging from tax holidays, geographical location, subsidies, and trade-based incentives could be given.

Thirdly, industrial policy should cultivate a favourable environment for growth and development benefiting the entire society as opposed to a few privileged bureaucrats (Rodrik, 2010). This requires an accountable and transparent process of implementing the industrial policy and the associated incentives.

Innovative industrial policy embedding these principles can accelerate structural change towards more productive and dynamic activities in the economy (Altenburg, 2011). This can lead to industrial growth, economic diversification and job creation. The State has a key role in this. In Chile, the State selectively promoted specific industries that had high growth potential. It provided sector specific incentives and protection which gave the private sector the incentive to start new industries. Some of these industries grew and some failed. Lessons were learned.

The United Nations Economic Commission for Africa (UNECA) argued for a dynamic industrial policy to transform economies by creating competitiveness of firms and protecting jobs in domestic economies (UNECA, 2014). The role of the State herein is important. To generate industrial growth requires nudges from the State (Kim, 1985). Industrial growth will result from policies and strategies that allow a State to play developmental roles in the economy. This will enable the nurturing of policies and strategies that promote the State's interaction with the private sector, develop an incentive and sanction regime with defined access rules and output indicators, and cultivate a favourable environment for growth and development benefiting the entire society (Rodrik, 2010). This was the experience in Chile, but has not been the case in Zambia.

For the purposes of our study we look at the experiences of Chile and Zambia. Chile has not only enjoyed a successful industrial growth process but, like Zambia, is resource rich. In 2013 it was ranked number 55 in the world in terms of its MVA per capita (UNIDO, 2013). Chile's industrial growth experience, therefore, holds important lessons for Zambia. Insights on how it has managed

to generate a dynamic industrial base with interlinkages to the copper mining sector is of relevance to Zambia.

Employment in Zambia

Zambia's economy suffers from a severe unemployment problem. This is manifested by limited employment opportunities in the formal sector, and a burgeoning informal sector. Total formal sector employment rose by 257.5% in the fifty years since independence in 1964. This is against the backdrop of a rise in the total population of 280.6 %, (CSO, 2013). Inevitably, there has been a sharp rise in the labour force and the labour force participation rate over time. However, employment has not risen enough to keep up with the rise in the labour force, suggesting a rise in unemployment over time. Only 14% of the total labour force was formally employed in 2014. Most new jobs have been in the informal sector. These are mostly temporary and of a relatively poorer quality than formal sector jobs. To understand the employment situation over time, we analyse it in terms of four discernible episodes observed since independence (Chansa et al, 2016).

The first episode was the 1964-1984 period. During this time, formal employment increased by 37% from 264,100 in 1964 to 361,976 in 1984. The period was characterised by robust growth. The State implemented an import substitution industrialisation (ISI) and Zambianisation programme (Seidman, 1974; Ndulo, 1979; Fincham, 1980). This saw a large number of jobs created in sectors where state-owned companies were set up. However, as the industrialisation programme faltered, the jobs began to disappear (Ndulo, 1979; Fincham, 1980). In the second episode, 1985 -1992, there was a spike in employment levels, that rose from 361,976 in 1984 to a peak of 544,200 in 1991. This spike was driven by the ISI programme through initiatives such as growth from own resources (Kayizzi-Mugerwa, 1990). This implied using domestic resources to resolve the faltering economic situation.

During the third episode, 1993-2003, the State implemented an economic reform programme, initially hesitantly but later hastily. Many state-owned companies closed down with widespread job losses. Between 2000 and 2003, formal employment declined further despite the rising GDP growth. One possible explanation for this was that the mining sector was beginning to revive and was gaining traction as the copper price was on an upward trend (Chansa et al., 2016). This drove GDP growth. Employment data shows that over this period employment in the mining sector increased by 39%, while that for construction and services declined by 75% and 21% respectively. Thus, overall employment declined despite the rise in GDP.

The fourth episode was the 2004–2012 period. This exhibited an overall

rise in employment of 74%. This impressive rise in employment coincided with the return to robust growth with real GDP growth at 6.9% over the period. The mining sector drove the growth. The rebounding copper price reversed the fortunes of the sector with spillover effects to other sectors in the economy. This had a major impact on direct and indirect formal sector job creation.

Sectorial decomposition shows that employment has largely been driven by the services sector (Chansa et al., 2016). For instance, between 1985 and 2014, employment grew in all sectors of the economy. This was dominated by electricity, finance, and wholesale and retail trade. These also exhibited strong growth (Chansa et al., 2016). In most other sectors, employment contracted over the period. The construction sector experienced the largest contraction of 51.6% followed by the transport and manufacturing sectors. These contracted at 36.2% and 24.8% respectively.

It is interesting to note that the manufacturing sector contributed 14.2% to total employment during the 1985-1989 period. Services and agriculture sector contributed larger shares at 29.8% and 15% respectively. In 2014, the manufacturing sector accounted for only 8.1% and has since been overtaken by the wholesale and retail sector. The latter is now the second largest contributor to total employment after the services sector. The contribution of the manufacturing sector in total employment has declined gradually over the entire period in contrast to the services sector whose contribution has continuously risen over this period. The change in fortunes for the manufacturing sector is partly explained by the failure of the state sponsored ISI programme and exacerbated by the post 1991 economic reforms as elaborated below.

Performance of the Industrial Sector

The performance of the manufacturing sector echoes the trends in employment observed above. The Manufacturing Value Added (MVA) as a percentage of GDP rose steadily from independence until 1992. It then fell sharply due to the collapse of the ISI and consequent closure of manufacturing firms. This is shown in Figure 1¹. Output shrank considerably both per capita and as a percentage of GDP. It was much more pronounced as a percentage of GDP. This is because while MVA contracted by 68.5% in the 1992-1994 period, GDP expanded by 12.6% over the same period. MVA per worker has generally been on an upward trend since 2000. This is exhibited in Figure 2. This suggests that the average productivity of manufacturing labour has been growing steadily.

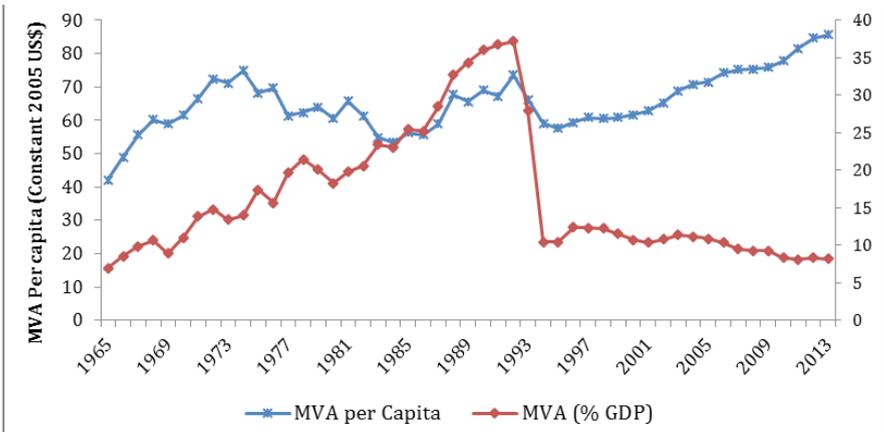


Figure 1: MVA per Capita and MVA (% GDP): Zambia: 1965 - 2013
 Source: World Bank (2014)

What is more revealing is that, since 1995, the two trends seem to be moving in divergent directions. While MVA per capita seems to have returned to its upward trend, MVA as a percentage of GDP has continued to decline. One possible explanation for this observation is that while MVA has been growing modestly since 1995, this growth has been far outweighed by the growth in GDP hence causing the ratio to keep declining. Thus, the performance of the industrial sector has not kept pace with the performance of the overall economy.

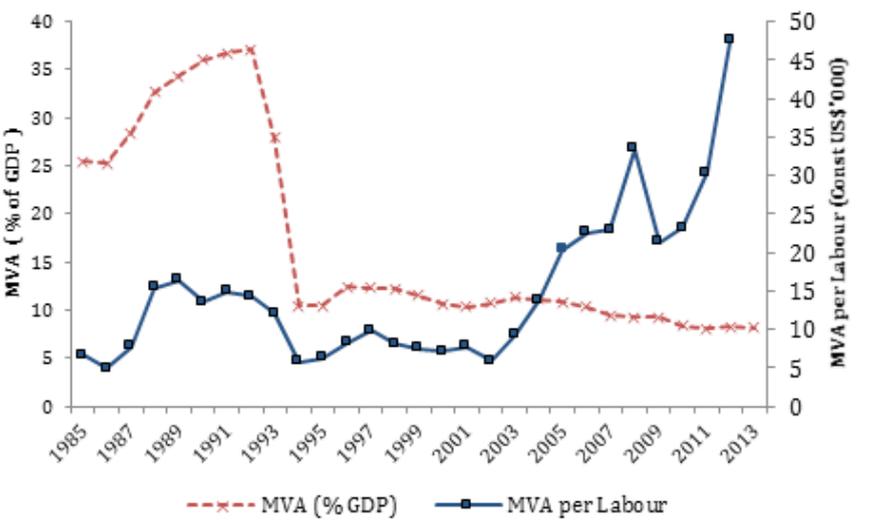


Figure 2: MVA per worker and MVA (%GDP): Zambia, 1965 - 2012
 Source: World Bank (2014) and CSO Data

The poor performance of the industrial sector is even more apparent when we compare with that of Chile. This is shown in Figures 3 and 4. Zambia's MVA is stuck in the lower echelons while that of Chile seems to be growing. This trend is consistent with the findings of Meller and Simpasa (2011)

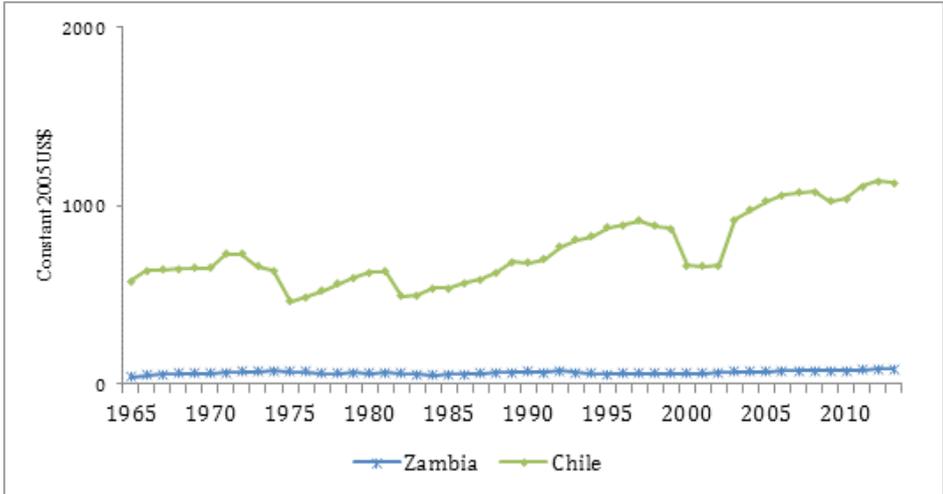


Figure 3: MVA per Capita: Zambia and Chile, 1965 - 2012

Source: World Bank (2014).

In Chile, the MVA as a percentage of GDP has grown continuously. This is shown in Figure 4. This is based on productivity gains and strong economic performance. In Zambia, this seems to have grown intermittently during the 1980s. This was due to increased manufacturing output under the ISI programme and contraction of GDP. This explains why Zambia's MVA exhibited larger shares of GDP than in Chile in the 1986 to 1993 period. However, this trend for Zambia reversed after 1995 following the collapse of most SOEs in the manufacturing sector.

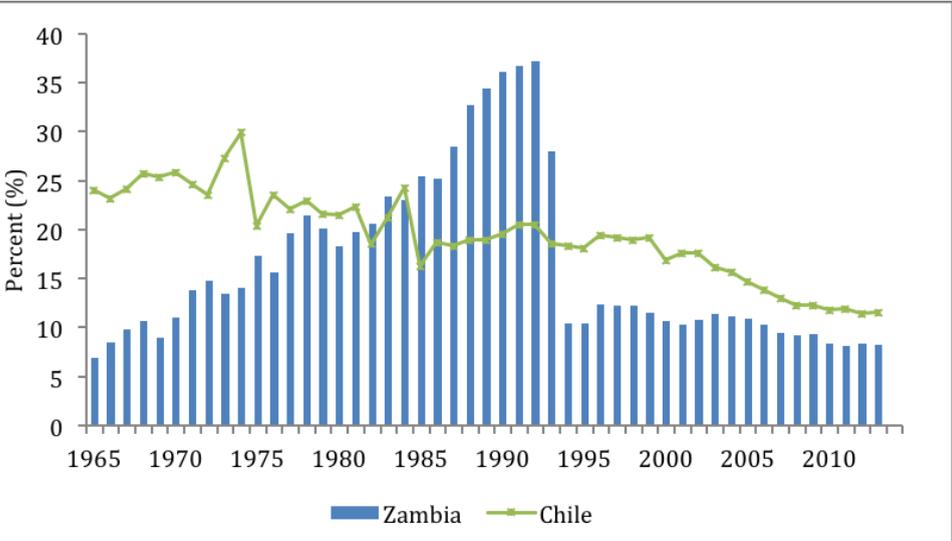


Figure 4: Percentage Contribution of MVA to GDP: Zambia and Chile, 1965-2012.
 Source: World Bank (2014)

Manufacturing in Zambia is dominated by the food, beverages, and tobacco sectors. These contributed 67.6% of manufacturing GDP over the 1994-2012 period. The remaining sectors contributed less than 35% of manufacturing GDP. The fact that this structure has persisted over a number of years illustrates the fact that the efforts to diversify manufacturing output has been met with little success. The share of the textiles sector in total manufacturing has declined from 13% in the early 1990s to less than 1% in 2011.

Industrial Policy and Strategy in Zambia

Zambia has oscillated with policy reforms since independence in 1964. Economic policies were initially liberal in the period after independence. They turned inward-looking in 1968 and turned to a virtually free market orientation in the early 1990s. In line with these changes, the country’s industrial policies have also varied from liberal market strategies, to a state-led industrialisation and back to free market strategies. We review the country’s industrial policies since 1964 under three phases structured around the initial industrial policies of 1964 to 1968, the second phase of inward-looking policies of 1968 to 1991, and conclude with the discussion of the post-1991 phase.

The Initial Phase: 1964-1968

Zambia inherited a strong and one of the most prosperous economies in Africa

(Baldwin, 1965). It had an average annual per-capita income of US\$500 and an average annual population growth rate of 3% (World Bank, 2014). Despite the strong economy, the human capital situation was desperate. There were fewer than one hundred university graduates and fewer than one thousand secondary school graduates (O'Brien, 1982). Further, the provision of public infrastructure was largely limited to urban areas mainly around mining towns. The economy was dominated by an industrial enclave focused on foreign financed copper mining, on which the high income was based² (Baldwin, 1965).

The inherited industrial policy neglected the promotion of domestic industry. The manufacturing sector was small and mostly foreign-owned. Virtually all manufactured products were imported from abroad (Musonda and Adam, 1999; Mudenda, 2009; Hawkins, 1989). To address this situation, the new UNIP administration implemented the Transitional Development Plan (TDP) to accelerate development, create employment, and diversify the economy away from copper (Central Planning Office, 1965). The promotion of industrial growth was a means of diversifying the economy. Industrial policy remained relatively market-oriented. The State extended loans to the private sector through the Industrial Development Corporation (INDECO). Between 1964 and 1968, INDECO expanded its loan portfolio to private firms from about K2 million in 1964 to K16 million in 1967. However, Zambian entrepreneurs were scarce and marginalised. Few had the skills, capital and experience necessary to establish successful businesses (Craig, 1999; World Bank, 1984).

The First National Development Plan (FNDP) pursued objectives that emphasised the diversification of the economy, import substitution, increased employment, and reduction of inherited income inequalities between the rural and urban sectors. Resources were pushed into education, social welfare, and infrastructure. However, there was a worrisome perception of exploitation by foreign entrepreneurs in the business sector. This led to a change in strategy of how to organise the private sector. This was justified in the official "humanism ideology", a socialist-oriented policy that focused on group ownership, redistributing income, and wealth rather than growth at the end of the 1960s (Makgetla, 1986; Hawkins 1991).

The Second Phase: 1969-1991

In the late 1960s, the State was dissatisfied with the limited participation of indigenous Zambians in economic activities. The foreign-owned firms reinvested little and externalised all their dividends. The experience of the few state-owned enterprises under INDECO was positive. This incentivised the State to take controlling interests in existing private firms. Thus, through the Mulungushi and Matero Reforms, the State pursued public ownership of several

major companies (Turok, 1979; Craig 1999; Makgetla, 1986; Hawkins 1991). The main thrust of industrial policy was to promote industrial growth through State investment and State participation; this would further foster linkages across sectors (Musonda and Adam, 1999; Craig, 1999). The strategy initially targeted consumer goods such as food and beverages, wood and wood products, textiles and wearing apparel. Subsequently, large-scale state investments were automobile assembly, chemicals, and mineral products.

Under the Mulungushi Reforms, the State acquired 51% shares in most private companies. Several manufacturing, hotel, and mining firms were later nationalised. New state-owned firms were established. A number of manufacturing firms were established in remote regions to promote rural industrialisation even if, at times, they did not make economic sense. By the mid-1970s, State involvement extended to areas as diverse as manufacturing, agriculture, mining, banking and finance, retail trade, and tourism. By 1975, a relatively large share of industrial output came from heavy industries such as chemicals, mineral products, metal industries, and motor vehicle assembly. This was supported by revenues from high copper prices during the period 1969 – 1975. The manufacturing GDP grew at an average of 11% per annum. Its share in GDP increased from 6% in 1964 to 18% in 1975. State-owned enterprises contributed over 54% of the manufacturing GDP (Makgetla, 1986; World Bank 1984; Hawkins 1989). This was supported by revenues from copper during the period 1969 – 1975.

Further, the State intensified its regulation of the private sector. Private businesses, especially foreign-owned, were not allowed to grow beyond prescribed sizes and were often restricted to specific geographical locations and areas of operation. State-owned enterprises were mandated to produce important and strategic goods. A Prices and Incomes Commission was established to control prices. FDI in key sectors required government approval and licensing. The licences stipulated conditions such as the size, location and products that firms could produce (World Bank, 1984; Bhagavan, 1978).

Industrial growth was further spurred by the trade sanctions on Rhodesia, a key source of imports, following its Unilateral Declaration of Independence (UDI) in 1965. The sanctions created effective protection to domestic industry. The import deficit stimulated domestic production to meet domestic demand (Ndulo, 2015; World Bank 1984). The import substitution industries were also supported through incentives such as guaranteed government procurement of products from these firms.

To support industrial growth, the State designed a complex trade policy regime. This comprised a mix of high and cascading tariffs (ranging from 0% for capital goods to 150% for final consumer goods). An import licensing system with quantitative restrictions was introduced as part of industrial policy. These

policies led to the expansion of the industrial base, which was ranked third in Sub-Saharan Africa at the time (Faroutan, 1993). The growth of the SOEs was associated with rapid increases in formal employment. Between 1969 and 1975, formal employment in SOEs increased at an average of 12% per annum (World Bank, 1984). In 1975, the SOEs contributed over 50% of manufacturing employment. However, this employment trend stagnated as the economic crisis set in after the mid-1970s. It picked up in the mid-1980s.

This industrial growth had inherent weaknesses that constrained its sustained growth (Hawkins, 1991; Seshamani, 1994;). Firstly, inputs in many industries, such as chemicals and automobile assembly were very import intensive. They also used foreign technology with limited adaptability to local conditions. This generated limited linkages to the rest of the domestic economy.

Secondly, the shortage of local skilled and educated workers was a major problem. The shortage was worse at the operational and managerial levels. The companies had to rely on expatriates to manage the SOEs. With the economic crisis after 1975, SOEs could not attract and retain skilled personnel (World Bank, 1984).

Thirdly, most SOEs remained inefficient. They relied on State budget support and on cross-subsidisation of loss-making companies by profitable ones through a complex organization of holding companies. This created complacency which affected performance. The situation was exacerbated in the mid-1970s, when the economy experienced adverse shocks from falling copper prices and rising import prices (Makgetla, 1986; Musonda and Adam, 1999).

With a narrow tax base, the contribution of copper to state revenues fell drastically from about 51% in the period immediately after independence to an average of 10% between 1982 and 1991. The contribution to GDP fell from 36% to under 15% (Musonda and Adam, 1999). This made it difficult to sustain the loss-making firms. Furthermore, foreign exchange shortages and the rise in import prices reduced the economy's capacity to import by almost 50% in the mid-1980s. This affected the importation of spare parts and inputs in the private sector and adversely affected capacity utilisation. The economic crisis generated an insurmountable deficit in the balance of payments, exacerbated by Zambia's landlocked location which contributed to high transport costs (Craig, 1999; Seshamani, 1994; Hawkins 1989).

To resolve the foreign exchange shortages, the State centralised the allocation of foreign exchange. Priority was given to SOEs which made them complacent in their pursuit of efficiency and profits (Seshamani, 1994). The consequent overvaluation of the Kwacha fostered cheaper imports of intermediate inputs and consumer goods. This effectively served as a tax that reduced the competitiveness of exports in the international market.

Despite the poor performance of SOEs after 1975, the State was only concerned with maintaining employment levels in the sector. It vetoed any closures that would result in large-scale redundancies. The inefficient SOEs were supported by the State to maintain employment even in difficult times. Consequently, worker productivity in SOEs fell by an average of 14% between 1975 and the mid-1980s (World Bank, 1984).

The poor performance was exacerbated by direct and indirect political interventions. This was done through the State and the ruling party's participation on various boards that determined investment projects³. For example, industries were established in remote regions without consideration of trade costs and internal market access. This limited the competitiveness of these products in international markets.

However, the private sector remained important in sectors where the State did not crowd it out, but remained constrained by the dominance of the SOEs. It had to bear similar costs as the SOEs such as low external competitiveness due to the overvalued exchange rate. It had little support from the State. The private sector was heavily taxed to support the public sector. It had far less access to foreign exchange than SOEs. Often the private businesses survived and received incentives on personal contacts with State agencies or assistance from business groups such as the Chamber of Commerce and Industry. There was no proper structure for state-private sector dialogue (Hawkins, 1991). There were no clear procedures for the private firms to access incentives.

In the early 1970s the State neglected the promotion of private small and medium scale enterprises (SME). There was an effort to correct this deficiency in the 1981 SME Act. Thereafter, there was a discernible effort to support small scale firms in the private sector. This was aimed at expanding output and employment to boost incomes, and foster rural development (Chansa et al., 2016).

What is discernible from the policies between 1968 and the late 1980s is that the State worked to crowd out the private sector rather than complement it, through the resolution of market failures and the coordination of markets. Three major adverse shocks undermined the strategy. Firstly, the deterioration of the terms of trade as a result of the fall in copper prices and rise in oil prices made it difficult for the State to generate sufficient resources to sustain SOEs. Secondly, the economy suffered as a result of conflicts among neighbours, which increased the transportation costs of imports and exports. Finally, the State response to the crises was to maintain consumption at the expense of investment. The State delayed adjustment and used external borrowing to resolve the crises. This resulted in the deterioration of the economic disequilibrium such as large budget deficits, external debt, shortages of foreign exchange, and inflationary pressures.

To mitigate the disequilibria, the State resorted to increased controls and regulations such as foreign exchange and price controls. It was hesitant to adjust and reform the economy. Industrial policy and strategy remained highly politicised and without any complementary policies such as technical skills training for industrial and technological upgrading. The shortage of skilled labour contributed to the weak performance of the industrial sector. The business environment remained antagonistic to private investors with no meaningful structure for state-private sector dialogue,

The Third Phase: 1991 and thereafter

After several policy reversals and hesitation to reform, the State, in 1989, started to implement far reaching policy reforms. A new industrial policy to promote the private sector was promulgated. Institutional arrangements were made to oversee the process to privatise almost all SOEs. This period also coincided with the reintroduction of multiparty elections in 1991 which saw a change in the administration of the State from UNIP to the Movement for Multiparty Democracy (MMD).

The MMD administration strongly pushed the reform agenda further under the economy-wide structural adjustment programme. The reforms were swift and far reaching. They replaced interest rates and price controls with market-determined policies aimed at restoring economic efficiency and growth in the economy. Domestic and foreign trade was liberalised.

The practice of industrial policy witnessed a drastic change as outlined in the Policy Framework Paper (White, 1997). Industrial growth was now to be pursued through a market-driven and outward-oriented strategy. The policy eliminated all industrial licensing (except for essential registration) for all levels of private investment. The privatisation of SOEs was emphasised. The State committed itself to privatising over 300 SOEs. Between 1992 and 1998, many SOEs in wholesale and retail trade, tourism, manufacturing, and mining sectors were privatised.⁴ Meanwhile budget support to loss-making enterprises was withdrawn.

The 1994 industrial policy document concretised the new policy. This was revised in 2010 and 2015, albeit with minor difference. The objective was to support private industries that maximised the use of domestic inputs and fostered linkages within the manufacturing sector and the rest of the economy. The industrial sector was to contribute to the diversification of the economy through exports of value added products. FDI was to be encouraged to stimulate exports and induce innovation and technological transfer into the economy. Several sectors were identified as growth sectors; food and beverages, engineering products, wood products, leather, textiles and clothing (Mudenda, 2009, Chansa et al., 2016)

To nurture industrial growth, the State pushed for a conducive environment for the private sector to thrive. Thus, not only was trade liberalised, but the current and capital accounts were also opened. The tariff structure was rationalised and simplified. Several incentives such as tax holidays and low tariffs on capital equipment and raw materials were provided to the private sector in an *ad hoc* manner.

In 2005, another industrial strategy was initiated. This focused on establishing multi-facility economic zones (MFEZ) under the supervision of the Zambia Development Agency (ZDA). The purpose was to make the industrial sector competitive through increased domestic and FDI in manufacturing for exports. The investors in these selected areas are provided with complementary physical infrastructure, customs and tax incentives as a way of fostering industrial growth (Chansa et al., 2016). Unlike the experience from South Korea, where the MFEZs are built on demand from the private sector, the zones in Zambia are driven by a political agenda. There is very little involvement or demand from the private sector. Furthermore, the zones lack a coordinated and all-encompassing supply of complementary services such as skilled labour, power supply, and established infrastructure (Chansa et al., 2016).

The State has also established a state-owned credit institution, the Citizens Economic Empowerment Commission (CEEC) to foster the growth of locally-owned SMEs. The Industrial Development Corporation (IDC) was also re-established in 2014 as a holding company of all SOEs. Its objective is to secure investment funds and promote industrial growth. The governance structure of IDC does not drastically deviate from the initial INDECO board. The board comprises influential political figures. Among them are three cabinet ministers, the Secretary to the Treasury, and the Permanent Secretary at the Ministry of Commerce Trade and Industry (all appointed by the Republican president). There are some members from the private sector. The president chairs all the board meetings.

Areas for Industrial Growth and Job Creation

The Zambian State has formulated policies and strategies to foster industrial growth. It has pursued many policies and programmes over the years. However, these have not been dovetailed to job creation, institution building, and sector specificity. Therefore, compared to Chile, there has been a poor record of developing specific, viable, and implementable policy strategies to realise the opportunities inherent in the key areas inhibiting growth. This has limited industrial growth and job creation. What are these key areas whose nurturing can enhance industrial growth and job creation? We focus on three of them. These are youth unemployment, sectorial policies and institutions, and agribusiness.

Youth unemployment

In Zambia, youth unemployment is a serious problem and currently at an average of 18%. Therefore, it is imperative that a sustainable industrial policy fosters jobs for the youth. Not only is there an urgent need for more youth employment, but also a need for these jobs to be sustainable. While this paper focuses on job creation holistically, it also looks at how Chile approached the problem of youth unemployment and illuminates the valuable lessons for Zambia; (i) the different mechanisms Chile used to create better and sustainable jobs, and (ii) how they ensured that the youth acquired the skills necessary for various industries.

Sectorial Policies and Institutions

Today, Zambia faces challenges in fostering private sector growth and prosperity through public policies despite having identified key sectors for growth. Additionally, the State has not been successful in realising the opportunities inherent in the identified areas. This is largely due to lack of comprehensive and viable policy strategies, or lack of institutional capacity and political will. A clear understanding is needed on how Chile supported specific sectors of the economy, while at the same time avoiding the risk of creating “white elephants”, how State support can be linked to the expansion of industrial output in priority sectors and sustainable job creation and, lastly, what mechanisms have been used for supporting the different sectors, which reduces the risk of rent seeking, weakened governance, government failures, and corruption.

Agribusiness

One relevant sector that has been considered important for potential growth and job creation for Zambia is the agribusiness sector. Agribusiness could create employment and generate incomes along the value chain from the primary producer to the consumer. It can widen the tax base, and increase foreign exchange earnings (GRZ, 2006). Therefore, understanding the barriers to the expansion of agribusiness and what Chile has done to overcome these barriers is important for Zambia. The key questions asked are: (i) What has Chile done to ensure private sector growth and job creation in the sector? (ii) How to identify potential agribusiness sectors and what are the main barriers to expanding agribusiness? (iii) Which specific policies have allowed Chile to overcome these barriers?

Industrial Policy and Strategy in Chile

We look at industrial growth in Chile to draw some lessons from its experiences. We examine the role the State played in promoting industrial growth and

employment creation. We seek lessons on the key areas of youth unemployment, sectorial policies and institutions and sector specific policy formulation for growth and job creation, focusing on the agribusiness sector.

The involvement of the private sector in the creation of quality jobs is recognised in the development literature. Industrial growth is crucial in this. As stated earlier, industrial policy is not only a list of specific policies, but it is also a state of mind that mandates collaboration between the State and the private sector (Rodrik, 2010). We therefore look, at how the State, through industrial policy, engaged the private sector to spur industrial growth and create jobs. The experience of a mineral resource-based country, such as Chile, in ensuring a successful industrialisation process is relevant to the growth process in Zambia.

Chile grew from a low-income to a high-income country since the 1960s. During that time, it sustained positive growth rates. In the 1970s, Chile pursued protectionist policies with high tariffs to spur its industrial growth. This strategy led to shortages of foreign exchange, high inflation and declining GDP. It, however, spurred some industries but stunted export growth, especially in products like copper and salmon. In the mid-1970s, the country changed its stance and carried out major reforms. The economy was liberalised, SOEs were privatised and sustained efforts were made to control inflation. The reforms were implemented in three phases; 1974-83, 1985, and 1990. These were later continued and strengthened after 1990. The State focused on international trade to revive the economy. It promoted exports of copper, silver, wine, salmon, seafood, and lumber. These policies were continued by the post-Pinochet administrations.

To spur industrial growth, the State encouraged experimentation, learning by doing, R&D, accumulation of tacit knowledge, and innovation. It developed an institutional framework for industrial policy that addressed market failures and innovation. Innovation was treated as an explicit policy goal. The focus on state-supported innovation was concentrated in specific sectors where the country had existing, or potential, comparative advantage and therefore had strong growth prospects.

The innovation practices pursued commercial application of ideas that were at the frontier of knowledge and introduced set ideas that were being used elsewhere (self-discovery). This was funded through the Corporacion de Fomento de la Produccion de Chile (CORFO) and the Consejo Nacional de Investigacionen Ciencia y Technology (CONYCIT). The former subsidised the demand for innovation and the latter subsidised the supply of knowledge by universities and research centers. Innovation was funded from the State budget and the mineral royalty tax. Tax rebates were offered to R&D activities and to FDI in high technology sectors.

CORFO was established to increase innovation, entrepreneurship, and competitiveness in the economy (USAID, 2009). It controls INNOVACHILE, which is in charge of the application of the country's innovation policies to increase competitiveness. INNOVACHILE provides grants to companies and technological centres. This funding depends on risk, innovation potential, economic potential and externalities and the degree of collaborative effort.

R&D activities benefited from tax credit and tax-deductible allowances. This implied that much of R&D expenditures was paid for by the State. Furthermore, all types of R&D expenditures were allowed. This could be performed in-house, by third parties, or partially done in a foreign country.

The State targeted sectors that had already demonstrated comparative advantage and showed strong growth prospects. It built on those successes by introducing advanced technology into production. It focused on upstream or downstream activities of the selected sectors. The sectors targeted were copper mining, aquaculture, fruit production, beef, pork, and poultry, and off shoring services.

The specific sector strategy in mining, was to move towards engineering services (upstream), or chemicals for mining, or mining machinery (downstream), rather than focusing only on the export of ore. In other words, because of the strong specialisation in natural resources, Chile had acquired particular skills and technologies in mining (e.g. mining-related engineering services). This took advantage of the proliferation of global value chains. Mining-related engineering services were exported. This loosened the link between copper prices and the country's export performance. The strong position in the upstream segments of the copper value chains made it possible to add other activities, such as further chemical or manufacturing processing, to its raw copper products. In fisheries, the State adopted Norwegian technology in salmon production in 1981. This was after several failed attempts throughout the 1960s and 1970s to grow trout and salmon. Salmon exports increased from about US\$1 million to about US\$159 million in 1991 and US\$2.4 billion in 2008. Chile is now the second largest salmon exporter in the world. This was also the experience with the blueberry sector, which was established in the 1980s and is now a major export product.

Over the years, the country faced challenges with institutional capacity. The State responded by putting up mechanisms that would allow the economy to overcome these. For example, when the State was setting up new industries, CORFO facilitated the training of managers and key personnel abroad. In the case of salmon production, CORFO provided the funds for people to go to Norway to acquire skills.

Employment Creation and the State

Chile has faced youth unemployment. Young people aged between 15 to 29 years represent about 40% of the working population. Youth unemployment was on average 2.5 times higher than that of adults in the 1980s. Informality in employment was much higher among the youth than adults (UNESCO, 2012). The advent of liberal reforms led to a spike in unemployment. The youth were more adversely affected by the reforms because they had low levels of human capital formation. However, youth unemployment declined over time from 30.5% in 1980, 22.7% in 1985 and 13.1% in 1990. It stood at 16.1% in 2012 (World Bank, 2012). This shows that youth unemployment has significantly reduced. We can learn valuable lessons on how this was accomplished.

The high youth unemployment emanated from the uneven distribution of opportunities provided by the education system. Youth with the lowest levels of formal education, mostly from poor families had the highest risk of unemployment. The economic reforms created a stock of young people from poor families, with inadequate levels of human capital. These were marginalized and exposed to high-risk behaviours such as crime, drugs and violence (Aedo, 2004).

To address the problems associated with youth unemployment, the State started schemes oriented towards the youth. Notable among these schemes were the *Chile Joven* and the *Extra21* (Chansa et al., 2016). The schemes designed special training programmes outside the framework of the traditional mechanism to equip youths with the right skills (Veza, 2013). Furthermore, a number of methods to support youth employment or to address labour demand barriers were used. Incentives were given to employers to address the scarce demand for young workers. These were based on legislation such as the uneven minimum wage, the wage subsidy and reduced social security contributions (Chansa et al., 2016).

Sectorial Policies and Institutions

Chile's industrial policy focused on resolving specific market failures that affected the economy, improving productivity and raising the technological content of existing sectors. A number of market failures were identified. These were credit constraints affecting SMEs, dearth of university students from low-income households, labour training, the public goods nature of some types of export promotion activities, and innovation.

The State supported specific sectors through the activities of an entrepreneurial institution called Fundacion Chile (FCh). FCh acted as a venture capitalist. It promoted innovation and self-discovery. It set companies in new sectors of the economy. These were later sold off to the private sector (e.g. the

salmon project). It also promoted partnerships with private investors with a clear exit strategy. The Agency concentrated in six natural resource abundant sectors. These were agribusiness, marine resources, forestry, environment and chemical metrology, human capital, and information and communication technologies. In the marine, forestry, and agribusiness sectors, it promoted commercial projects that utilised technologies that were not in use in Chile (Alvarez et al., 2003). Examples are the salmon and blueberry industries.

The State provided financial and technical support for MSEs through Fondo de Garantía para Pequeños Empresarios (FOGAPE). Access to credit was a major constraint facing MSEs because of the lack of collateral and a track record of timely repayment. FOGAPE guaranteed a certain percentage of the credit granted by financial institutions to MSEs, small exporters, and organisations of small businesses. The guarantees were used to secure credit for working capital and investment projects. Small business associations could use the guarantees for infrastructure investment, purchase of equipment, and irrigation and drainage projects.

The costs to the State of the FOGAPE programme were estimated to be negligible. The State provided a subsidised loan preparation scheme for micro enterprises. This increased access to bank credit by many formal micro enterprises (Agosin et al., 2009). The State subsidised new exporters and supported the selected sectors in a manner that reduced risks of rent seeking, poor governance and corruption. Consejo Nacional de Innovación para la Competitividad (CNIC) was set up to create platforms useful for several sectors (e.g., the development of a venture capital segment of the capital markets) and to undertake strategic bets on specific industries. To minimise rent seeking and benefit capture by bureaucratic interests, the Council was made permanent and its members nominated by the president and ratified by the Senate. The term of office of the councilors would not coincide with that of the president. This would help avoid problems of political patronage and interference. The Council consisted of academicians, business leaders, and high government officials. This was to ensure checks-and-balances to policy making.

Agribusiness

Chile identified potential growth sectors in the economy. It looked for sectors that were within reach, given the country's existing or potential comparative advantage, and had strong growth prospects. Agribusiness was one such sector.

The country faced a number of challenges in developing the agribusiness sector. These required a mix of interventions to resolve them. There were coordination problems which made it difficult for the sector to take off. It was difficult to attract private investment. Firms lacked access to credit. In the early

1970s most of the firms were SMEs. These were considered high risk and denied credit by the banks. There was also a lack of human capital in the sector. There were not enough workers with the required skills and in some cases, none. This meant that productivity was very low. There was poor infrastructure and low mechanisation.

The State designed policies to resolve the coordination problem. These included actions that addressed legal constraints. It introduced subsidies to attract private investment to the sector. A loan guarantee scheme under FOGAPE was introduced to resolve the problem of access to credit. The guarantee scheme reduced risks that banks faced when lending to agribusiness SMEs. There were deliberate efforts to provide human capital for the sector. This involved targeted training and acquisition of skills required for the various agribusiness firms. This was necessary to raise productivity.

The State used a combination of channels to get this done. It sent managers and employees abroad, for example to Norway, to learn the practical skills in salmon production. Workers learned how to adapt Norwegian technology to Chilean conditions in the early days of the salmon industry. Furthermore, the State and the private sector invested significant resources to train skilled professionals in the industry. The State facilitated training programmes in biochemistry, pathology, engineering, business administration, and aquaculture, among others. This was done at local universities. In addition, the Salmon Institute of Technology (INTESAL) provided training for workers. There were fiscal incentives that enabled firms to claim tax deductions on expenses incurred in the training of workers (UNCTAD, 2006).

The State also strengthened agricultural production to support the development of the agribusiness sector. It provided subsidies to farmers. For instance, farmers received subsidies to install or improve existing irrigation systems on their farms. Communities and regions benefited from off-farm irrigation investments made by the State. There was also a soil recovery programme. This provided subsidies to finance activities to recover or improve degraded soil. Some of these activities included: phosphate fertiliser applications to restore the natural level of soil fertility; calcium fertiliser applications; the establishment and regeneration of grasslands; soil conservation, and crop rotation.

Subsidies were provided to improve access to credit and an agriculture insurance programme was introduced. A subsidy was given to farmers who took out crop insurance. Risks covered were those caused by climate hazards such as drought, excess or untimely rains, hail storms, snow, and wind. The eligible crops included cereals, industrial crops, vegetables, and legumes. There were also subsidies aimed at improving the productive, managerial and entrepreneurship capabilities of small scale farmers (OECD, 2008).

Specific Lessons for Zambia

Chile provides a rich experience that Zambia can learn from. What are these lessons? We look at these lessons in respect of the key areas for Zambia, whose resolution is labour intensive and would create increased job opportunities. These are youth unemployment, sectorial policies and strategies, and support to the agribusiness sector.

Youth Unemployment

There are important lessons on how to manage the problem of youth unemployment. Chile used different mechanisms at different times to resolve youth unemployment. How did they ensure that youths acquired the right skills for industry and that there was no skills mismatch? The key lessons are those from strategies that overcame labour demand barriers for youth and the need for comprehensive skills training.

The first lesson is that to resolve the youth unemployment problem there is need for strategies that overcome labour demand barriers for the youth. This requires a combination of interventions that stimulate labour demand. The youth are endowed with lower levels of tacit knowledge or know-how compared to adults. This implies that the youth tend to have lower productivity than adults. It is this perceived lower productivity that discourages firms from hiring them. Therefore, in order to encourage firms to hire the youth, they have to be given incentives to compensate for the lower productivity.

Chile used a combination of interventions to stimulate demand for youth employment. They introduced a variable minimum wage policy. This stipulated a lower minimum wage for anyone aged below 19 years. They also put in place wage subsidies for any firm employing the youth. The State intervened through the payroll scheme to lower pension contributions for the youth. All of these interventions were aimed at reducing the perceived cost of hiring a youth and thus stimulate demand for youth labour.

The second lesson is that it is important to conduct skills surveys to see what is needed and then adopt a comprehensive skills training approach. Identifying the skills gap is a starting point to resolving youth unemployment. The training initiatives must involve the private sector. In Chile, the State carried out surveys to identify the type of skills that employers needed and matched them to the needs of the youth. They initiated free training schemes for both technical and soft skills for diverse types of youth beneficiaries. Training was offered mostly at the semi-skilled level. Internships were encouraged and they put in place job counselors for the youth. In order to encourage the firms to carry out training upgrades for their workers, the State made the expense incurred by a firm on training to upgrade the skills of workers tax deductible. In short, Chile adopted

a comprehensive approach to ensuring that the youth are equipped with the right skills.

Sector Policies and Strategies

There are important lessons that have emerged from Chile concerning the pursuit of sector policies. This is in respect to actual policies, initiatives and strategies. We discuss these in respect to six major lessons learned. These are the need to identify key sectors to support, the coordination and monitoring of selected sectors, the opening up of new sectors, the framework for supporting SMEs, investment in R & D, and the lack of institutional capacity.

First, there is need to identify key sectors to support. The principle of comparative and competitive advantage should be the guiding principle. This requires a systematic strategy to identify sectors to support. The argument is that in the context of a finite resource envelope, concentrating resources in a few sectors with growth potential will have a large impact on the economy and employment creation.

In Chile, the State set up companies in new sectors of the economy. It would later sell them off to the private sector. The salmon and blueberry industries are examples. The State also technically and financially supported SMEs. It designed loan guarantee schemes and subsidised loan applications.

The experience from Chile suggests that by focusing on the economy's comparative and competitive advantage, the State will inadvertently foster labour-intensive industrial growth that creates jobs. Chile focused on increasing production and exports of mining, agricultural, fishing and forest products. These were labour-intensive. It targeted sectors which had already demonstrated a comparative advantage and had strong growth prospects in the international economy. The drive was to build on those successes by introducing advanced technology into production and by moving upstream or downstream of the value chain. For example, for copper mining, moving upstream meant going into fine cable production while moving downstream meant going into production of chemicals used in mining operations.

Once sectors were selected, there are lessons to be learned from the coordination and monitoring of the sectors. One has to effect a strategy that allows for coordination and continued monitoring of supported sectors. This is likely to ensure efficiency in the implementation of the support to the sectors, make it possible for early detection of potential problems with the support process, and allow for adjustments to be made.

In Chile, the coordination was a responsibility of a council. The council was a permanent body whose membership was assigned to academics, business leaders, and high government officials. This was in order to ensure checks-and-balances to policy making.

The third lesson is a strategy of opening new sectors. The State has an important role to play in opening up sectors which may initially have been perceived to have an unfavorable risk to return profile by the private sector. Experience from Chile has demonstrated that economies usually have certain sectors where the chances of setting up a successful company may be very low for a variety of reasons such as lack of expert know-how in that sector, uncertainty about markets, lack of infrastructure, etc. In such cases setting up a company for the first, second, or third time may not result in a profitable venture. In other words, the rate of failure may be unusually high. In such cases, it requires someone prepared to persevere in the face of many unsuccessful attempts. Faced with such high rates of failure, the private firms are usually unwilling to lead the way in such a situation. The State can give a nudge.

In Chile, the State set up new firms in certain sectors by itself or in partnership with the private sector with an exit strategy. For example, if the State set up a firm in a sector by itself, then it must ensure that once this new firm is viable, the State sells it to the private sector. By so doing, the State has led the way in opening up this sector (i.e. demonstration effect) and at the same time has avoided the risk of creating a “white elephant”. This is what happened in the case of salmon cultivation. The State sold the firm to a Japanese firm after it had demonstrated that the activity was viable. Similarly, if the State decides to set up a new firm in a sector in partnership with the private sector, it must enter into an agreement with private partners to eventually buy out the equity stake of the State in the venture. This was the case in blueberry fruit production.

The fourth lesson is the need for a framework to support SMEs. The lack of access to credit has been identified as a major constraint facing SMEs. This is explained by the fact that SMEs are generally viewed as high risk clients and as such banks and other financial institutions will only deal with them if they are able to charge higher interests. This inevitably reduces the ability of the SMEs to access credit.

Experiences from Chile suggests that the State created mechanisms for supporting SMEs both technically and financially. The State created a loan guarantee scheme to help reduce the perceived risk of lending to the SMEs. This enabled them to borrow at lower interest rates from the commercial banks. It also provided technical assistance to the SMEs through extension services and subsidised the loan application process.

The fifth lesson is that investment in R&D is critical to spur industrial growth. R&D investment is costly. There is, therefore, need for the State to have a clear R&D funding strategy. The State must foster experimentation, learning by doing, research and development, accumulation of tacit knowledge, innovation, technology adoption and adaptation. There are two approaches in organising

R&D efforts. A focus on new inventions and technologies and adopting already established technologies. The State rigorously pushed for R&D. It focused on undertaking and adopting already established technologies. This might be the most relevant and practicable for Zambia.

Chile offered incentives for R&D. The State treated innovation as an explicit policy goal in their development agenda. This focused on specific sectors given the country's existing or potential comparative advantage. It had two channels of funding innovation. The State subsidised the demand for innovation and subsidised the supply of knowledge by universities and research centres. Resources for innovation came from the State budget and the mineral royalty tax. In order for innovation to succeed, there must be policies geared to stimulate both the supply and demand for innovation. Equally important is the fact that the State must have a clear funding strategy for R&D and innovation.

Lastly, the sixth lesson is what to do in situations where there is a lack of institutional capacity. In this case the State should find mechanisms of learning from other countries. Chile sent people abroad to learn. This was done in the cultivation of salmon. Chile sent people to Norway to learn how to adapt the technology used in the sector.

Development of the Agribusiness Sector.

Lastly, we draw lessons on how the State in Chile identified potential agribusiness sectors. What are the main barriers to expanding the agribusiness sector? Which specific policies can overcome these barriers? Here, there are two important lessons for Zambia. This is in the identification of potential agribusiness sectors and in the monitoring of incentives.

Firstly, the identification of potential agribusiness sectors should be done within the framework of comparative and competitive advantage. The identification of potential agribusiness sectors in Chile was done in much the same way as general sector identification was done. This was by considering the comparative and competitive advantage of the various agribusiness sectors. There was coordination between the State and the private sector in the identification process. The State looked at activities that were within reach, given the country's existing or potential comparative advantage, and that had strong growth prospects. Secondly, a number of barriers to the development of agribusiness have been identified. Some of these are access to credit and finance, lack of infrastructure such as transport and storage, lack of human capital, insecure policy environment, low mechanisation, and poor coordination.

The way that the country tried to overcome these constraints is noteworthy. This involved a number of interventions. For instance, subsidies were provided to improve access to credit, subsidies for improving irrigation systems and

soil recovery programmers. The aim was to encourage more private sector investment. There was also a deliberate effort to invest in human capital required for the respective agribusiness sectors. The State, through local universities, carried out training programmes for workers. Other institutions such as the Salmon Institute of Technology also carried out training of workers. Subsidies were provided that aimed at improving the productive, managerial, and entrepreneurship capabilities of small scale farmers. The State also embarked on proper planning and coordination to ensure that the incentives are having the desired impact. Equally important, there was political commitment at the highest level to move the sector forward.

Zambia and Chile evolved different industrial policies and strategies over time. Chile managed to transform its industrial structure, while Zambia failed to do so. Chile garnered the developmental nature of the State to play a critical role in the industrialisation of the country. These policies and strategies hinged on the State's interaction with the private sector; the nature of the incentives and sanctions regime, and on how to share broadly the benefits from the growth process.

Endnotes

- ¹ The manufacturing sector is composed of the following sub-sectors: food, beverages and tobacco; textile and leather industries; wood and wood products; paper and paper products; chemicals, rubber and plastic products; non-metallic mineral products; basic metal products and fabricated metal products.
- ² The mines were mainly financed by capital from the U.S.A and the United Kingdom.
- ³ Although efforts to depoliticise boards and management of SOEs were made in the 1980s, political interventions through State appointments to key positions remained rampant.
- ⁴ The process of privatisation involves the dismantling of the corporate structures through which enterprises were held in the state sector and the development of these within the private sector. The business community that preferred privatisation was well represented in the MMD government, this made it easier to accept such radical changes.

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