An analysis into the relationship between tourism development and economic growth in South Africa amid the COVID-19 pandemic.

Masters Dissertation

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Abstract

The introduction of the COVID-19 and the start of the global pandemic dealt a blow to the global economy and resulted in the death of millions across the globe. The rapid spread of the COVID-19 virus not only put a severe strain on the healthcare sector but also on the global economy. The introduction of the pandemic saw the global economy experience a combination of both demand and supply shocks. The spread of COVID-19 and the measures put in place to contain it directly impacted production and disrupted global value chains. The pandemic additionally caused a reduction in global demand. With many economies across the globe experiencing contractions and economic growth experiencing a slowdown during the time, many governments sought the means to alleviate the effects of the pandemic while also sparking economic growth. This paper argues that the tourism sector potentially holds the key to igniting economic growth and uses South Africa as a case study to do so. It has previously been argued that the tourism industry is one that holds the potential to be a great contributor to economic growth and this has been somewhat supported within the literature. Following the hypothesis that tourism can be a great contributor to economic growth, this paper assesses how policies aimed at improving South Africa's Tourism industry amid the pandemic affects economic growth. The results of this study reveal that the policies associated with the Tourism Sector Recovery Plan manage to generate positive economic benefits within the tourism sector which then generated positive spillover effects throughout the economy as a whole, with output from each sector increasing as well as employment increasing. The implementation of each of the three policies namely, Corporate Support, Business Enablement and Tourist Experience resulted in a positive direct impact, indirect impact, and induced effects on the tourism industry and the economy as a whole. Moreover, each of the three policies under the Tourism Sector Recovery Plan managed to stimulate demand for commodities throughout the economy while creating jobs and resulted in increased output levels in the tourism sector and the economy. However, the percentage in output was modest. Despite the modest changes in output, many small to medium enterprises within the tourism sector and the economy at large greatly benefitted from the introduction of each policy.

Plagiarism Declaration

COMPULSORY DECLARATION:

1. This dissertation has been submitted to Turnitin (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.
2. I certify that I have received Ethics approval (if applicable) from the Commerce Ethics Committee.
3. This work has not been previously submitted in whole, or in part, for the award of any degree in this or any other university. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

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Chapter 1: Introduction

Economic growth has been something that all countries across the globe have constantly strived to achieve as a means of driving human development. Through economic growth, the state has been able to gain the resources needed to provide public goods to its citizens. Additionally, economic growth has allowed for wealth to be generated which has in turn increased people's income and allowed for them to potentially escape poverty and improve their quality of life. It is because of this that many nations seek to ensure that economic growth is realised.

Behind any economic growth are industries of note that have contributed towards the increase of output and overall gross domestic product. Some key industries that have contributed to economic growth in the past have included the primary industries such as agriculture and mining, the secondary industries such as manufacturing and the tertiary industries. However, following the introduction of the COVID-19 pandemic, that economic growth was hampered, and global economy was negatively affected. Many scholars have investigated the relationship between tourism development and economic growth believing that the tourism industry holds the potential to become a key driver of economic growth, especially in this growingly globalized world. Using the COVID-19 pandemic as a case study, this paper seeks to assess if tourism development can truly be viewed as a driver of economic growth following the effects of such a pandemic.

1.1. The importance of tourism

In recent years, there has been an increase in the rhetoric surrounding the importance of the tourism industry and the role it plays in the global economy. The global tourism sector has been described as an imperative fragment of the global economy as it is believed to hold a key position in the development of many countries (Čerović, S et al. 2015: 160).Furthermore, the sector has been described as the most important economic activity across the globe (Holloway et al. 2009). As previously mentioned, it is widely believed that the tourism industry is an industry that holds the potential to be a great contributor to economic growth and this idea has been largely supported within the literature. A report released by the World Travel and Tourism Council (WTTC) revealed that in 2019 alone, tourism contributed 25% of new jobs across the globe. The sector has been praised in the world of literature for its potential to be a key driver of growth. However, following the introduction of the COVID-

19 global pandemic, the tourism sector alongside the rest of the global economy took massive blow.

1.2. The COVID-19 pandemic

On the 30th of January 2020, the World Health Organization declared the COVID-19 outbreak a global health emergency and on the 11th of March of the same year, it was then escalated to a global pandemic. The COVID-19 pandemic is one that has taken the world by storm in recent years with infections exceeding 400 million and the death toll exceeding 5 million respectively (WHO, 2022). Upon its introduction, the pandemic not only put a severe strain on the healthcare sector but also on the world economy as a whole. To contain the spread of the virus, governments across the globe implemented different measures in response in the form of lockdowns and travel restrictions among other things. As a result of the pandemic and the interventions aimed at containing it across the globe, jobs were put at risk. In addition to the millions of people that were at risk of losing their jobs, businesses were also at risk of closing with many small to medium businesses being forced to shut down during the early stages of the pandemic.

The introduction of the COVID-19 pandemic saw the global economy experience a combination of both demand and supply shocks (Ahmed, B. 2020). The spread of COVID-19 and the measures put in place to contain it directly impacted production and disrupted global value chains (Maital, S & Barzani, E. 2020). Global supply chains and markets experienced a sizeable disruption (Maital, S & Barzani, E. 2020). Additionally, the pandemic caused a reduction in global demand. The closure of many businesses and the increases in the levels of unemployment globally forced consumers to reduce their spending (Maital, S & Barzani, E. 2020). The pandemic especially affected the travel and global tourism industry adversely. Besides the pandemic itself, the introduction of the interventions put in place to combat the pandemic such as the lockdown and flight bans devastated many local businesses in the tourism industry and those indirectly linked to the industry, forcing a temporary shut down and the loss of jobs as a result.

In its recovery scenarios, the World Travel and Tourism Council (WTTC) predicted that at best, global travel and tourism GDP would experience losses amounting to approximately $2.686 billion dollars and in the worst-case scenario, global travel and tourism would lose approximately $5.543 billion dollars in the year 2020 alone (Department of Tourism, 2020: 7). The baseline projection showed that the global travel and tourism reflected a loss of

$3.435 billion (Department of Tourism, 2020: 7). In the best-case scenario, the World Travel and Tourism Council predicted that 98.2 million jobs would be lost. In the worst-case scenario, the number more than doubled with at least 197.5 million jobs lost in 2020 alone as a result of the pandemic (Department of Tourism, 2020: 8). Beyond the tourism industry, the pandemic caused adverse effects in most sectors worldwide. Globally, GDP faced a severe decline as a result of the pandemic. Additional consequences associated with the pandemic included the worsening of poverty and an increase in the level of inflation (Ahmed, B. 2020). The spread of the pandemic and the initial interventions put in place to combat it resulted in a decline in economic growth globally.

A potential key to reigniting economic growth and beginning the road to recovery may be found in the tourism industry. The role of tourism in achieving economic growth has been a widely debated topic. However, as previously mentioned, a number of studies have identified the tourism sector as a potential key driver of growth with some believing that the sector could be one of the main keys needed to unlock economic recovery following the adverse effects arising from the global pandemic. Tourism improvement has been increasingly viewed as a tool for achieving food security, reducing the level of poverty, and driving overall economic development and this seems like a necessary tool because it addresses many of the problems created by the pandemic on some level while also protecting those that are the most vulnerable economically during the pandemic (Čerović, S et al. 2015: 160). Tourism has been viewed as poverty reducing due to the industry's ability to promote unskilled labour by providing part-time as well as seasonal employment (Ashley, C & Mitchell, J. 2006).

Using South Africa as a case study, this paper investigates the relationship between tourism development and economic growth while providing an answer to whether tourism development can reignite economic growth. Assuming that the concept of tourism led growth holds in a South African context, one can presume that a policy aimed at aiding the tourism industry in its recovery will also hold benefits for the rest of the economy and aid in sparking economic growth while fostering job creation. South Africa's government firmly believes that the tourism industry, among other key sectors has the potential to aid the economy in its recovery from the pandemic, whilst preserving jobs, improving the volumes of output, and fostering development and it is for this reason that this paper investigates the impact that the Tourism Sector Recovery Plan has on the sector and the economy as a whole.

As previously mentioned, many economies across the globe experienced a massive blow following the spread of the COVID-19 virus and are still recovering from the effects of the pandemic and the interventions put in place to combat it. South Africa is no different. With the introduction of the nationwide lockdown amongst other interventions, industries across the country were severely affected with travel and tourism being one of the most affected. To help resuscitate the industry, the South African government's Department of Tourism introduced the Tourism Sector Recovery Plan which stands on three pillars namely, to rejuvenate supply, resuscitate demand and strengthen enabling capability (Department of Tourism, 2020: 20).

In line with the Economic Reconstruction and Recovery Plan (ERRP), the country's plan for overall economic recovery published in late 2020, the Tourism Sector Recovery Plan is a response to the challenges arising from the pandemic namely, the closure of businesses, job losses and the bad public reputation arising from the variant of the COVID-19 virus, omicron, first identified in South Africa among other things. The Tourism Sector Recovery Plan was created with the intention of reinvigorating the tourism industry and the value chains associated with it. The paper will mainly focus on three policies that fall under the Tourism Sector Recovery Plan namely, (1) the Corporate Support policy, (2) Business Enablement policy and lastly the (3) Tourist Experience policy and analyse their impact on the industry and the economy as a whole. Introducing a policy aimed at resuscitating the tourism sector following the devastation caused by the global pandemic is necessary given that tourism is at times a large contributor to the services sector and GDP and this paper will answer the question of whether the recovery plan is the solution or if the answer lies elsewhere.

For over a decade, South Africa's services sector has been a significant contributor to the country's GDP and the tourism industry has accounted for a sizeable portion of that contribution from the service sector ("South Africa: GDP distribution", 2020). The tourism industry has been playing an increasingly important role towards South Africa's GDP with South Africa's tourism industry directly accounting for 2.9% of the country's GDP and indirectly accounting for 6.8% of GDP in 2019 (Department of Tourism, 2020: 12). In terms of jobs, the tourism industry has directly employed approximately 725 000 people and has indirectly employed 1.49 million people as of 2019 (Department of Tourism, 2020: 12). In 2019 alone, total tourism expenditure amounted to R126.7 billion (Department of Tourism, 2020: 13). The tourism sector has played an increasingly important role across the globe and within South Africa's economy and has the potential to play an even greater role towards

increasing economic growth as the South African economy continues to recover from the COVID-19 pandemic. Using a Social Accounting Matrix (SAM) this paper will provide a detailed evaluation and assessment of the impact that the Tourism Sector Recovery Plan will have on the tourism industry and the economy as a whole. This paper investigates the impact that the Tourism recovery plan has on key economic variables namely, employment, demand and lastly, output.

The paper is split into six sections, namely, the introduction, the literature review, the data and methodology, the results and analysis section, policy recommendations and lastly, the conclusion. The section to follow provides a detailed literature review on the relationship between tourism development and economic growth while also highlighting the severity of the pandemic on the global economy. The data and modelling will be discussed in the third section. The fourth section will unpack the results of the study and discuss the analysis of these results. The fifth section acknowledges the shortfalls highlighted in the results and analysis and provides policy recommendations and the final section is reserved for the concluding remarks.

Chapter 2: Literature Review

Firstly, this section will provide an in-depth review of the discourse surrounding the impact of the COVID-19 pandemic on the global economy and South Africa specifically. Secondly, this section will discuss the ideas raised by different schools of thought regarding the role of the tourism industry in realising economic growth and development. Lastly, this section will provide a discussion regarding the causal relationship between tourism development and economic growth as well as economic development based on the existing studies conducted across the globe on the matter as it is important to have an understanding of the direction and significance of this relationship to move forward with this paper.

2.1. The impact of disasters on the economy's growth

Economic growth has been defined as an increase in income per person and has typically been viewed as a means to fuel progress in social terms and this includes by increasing well-being and equity (Sen, K. 2021). Countries strive to achieve economic growth as it yields many benefits, and such benefits include increasing the state's capacity as well as improving the state's ability to provide public goods (Sen, K. 2021). However, the occurrence of disasters and pandemics such as COVID-19 holds the potential to undermine economic growth.

Though it is commonly believed that disasters negatively impact economic growth, the topic of how natural disasters impact economic growth has been widely debated within the literature. Economic theory has offered competing hypotheses regarding how disasters affect economic growth (Cavallo, E et al. 2021). There is a vast array of literature that analyses the effects of a natural disaster on economic growth and yet, up until recently, there has not been an agreed consensus (Cavallo, E et al. 2021). However, in recent years, it has been widely believed that disasters have a negative impact on short term economic growth while the medium to long term effects remain unclear. This seems to be the emerging consensus within the literature (Cavallo, E et al. 2021). Albaka-Bertrand (1993) argued that while economic growth declines immediately after a disaster, there are hardly any permanent effects on output in the long-run whereas, Noy (2009) reported that disasters have a negative impact on economic growth in the long run. In a study investigating the effects of disasters on long run economic growth, Kim (2010) found that a statistically significant relationship exists between

the economic growth rate and the frequency of disasters in the long run. The empirical evidence in his paper suggested that there exists a positive correlation between long run economic growth and the frequency of disasters Kim, C. 2010). The works of Skidmore and Toya (2001) support this idea with their study revealing a positive link between climatic events such as droughts and economic growth. However, there have been authors that have refuted this notion within the literature. Authors such as Strobl (2010) have argued that disasters are associated with significant economic losses in the form of loss of life and collapse of infrastructure, among other things. While investigating the impact of disasters on economic growth, a study revealed that catastrophic disasters have negative impacts on economic growth in the short run that are never fully recovered (Cavallo, E et al. 2021)

Despite the contradicting findings regarding the relationship between disasters and economic growth in the medium to long term, one thing is clear within the literature and that is the fact that natural disasters and pandemics adversely affect economic growth in the short run at the very least. The severity of how disasters negatively impact economic growth is dependent on the level of development that the country experiencing the disaster enjoys and this is further supported in the literature. A study investigating the relationship between disasters and economic growth revealed that disasters within developing countries result in the most significant adverse effect on economic growth (Klomp, J & Valckx, K. 2014). Another study investigating the impact of disasters on economic growth further supported the notion that the severity of how disasters and pandemics affect economic growth is dependent on the level of development. In this study, the findings revealed that developing countries were the most affected by disasters and further noted that the negative impacts of disasters on economic growth were larger for poorer countries (Cavallo, E et al. 2021). Furthermore, the study emphasized the fact that the negative impacts of disasters and pandemics are larger for smaller and poorer countries on a macroeconomic level and these negative impacts disproportionately affect more poor households (Cavallo, E et al. 2021).

Two key points have been highlighted within the literature. Firstly, disasters and pandemics have an adverse effect on economic growth in the short run. Secondly, the severity of how disasters and pandemics negatively impact economic growth is dependent on the level of development that the relevant country enjoys with developing countries experiencing a

greater negative impact as compared to more developed countries. With these two points, it is believed that a disaster or pandemic would be more devastating for developing countries, especially those with higher levels of inequality and thus South Africa was chosen as the case study for this paper.

It has been established that disasters negatively impact economic growth in the short-run and this has been widely supported in the literature. This idea has shown why the COVID-19 pandemic was as devastating as it was. However, to fully understand the severity of how the COVID-19 pandemic has affected South Africa's economy as well as the rest of the global economy, it is also important to fully understand the relationship between health and economic growth and assess how a health shock would affect the economy.

2.1.1 The relationship between health and economic growth

The relationship between health and economic growth is one that has been widely researched. An understanding of how these two variables interact has been a topic of interest as a clear understanding of the relationship assists policy makers when crafting policy. The majority of literature on the topic has revealed that health commonly has a positive and significant effect on economic growth and vice versa (Bloom, D et al. 2004). Studies investigating the link between health and economic growth such as those released by Barro (1996), Barro and Lee (1994), Barro and Sala-l-Martin (1995), Bhargava, Jamison, Lau and Murray (2001), Gallup and Sachs (2000) have confirmed the existence of a positive relationship between health and economic growth meaning that when one of these variables experiences a positive increase, the other will also likely experience a positive increase. The same can be said for when one of these variables experiences a negative shock. It has been widely accepted that the rise of a public health issue can result in a decline in economic growth. Although health has been shown to have a positive relationship with economic growth, the direction and significance of that relationship has differed throughout the literature.

Although the relationship between health and economic growth has been extensively researched, the regressions used in a multitude of these studies has not directly revealed whether health directly influences economic growth, and this has been a matter of concern when investigating the relationship. However, the research of authors such as Bloom (2004)

not only corroborate the findings highlighted in past literature regarding how health impacts economic growth but also compliment their findings by revealing how health directly benefits economic growth. Bloom, Canning, and Sevilla (2004) investigated this relationship with the aim of their study being to reveal how health influences economic growth by including health in a well specified aggregate production function (Bloom, D et al. 2004). Their findings revealed that health has a positive and statistically significant effect on economic growth. Furthermore, Bloom, Canning, and Sevilla (2004) concluded that good health has a sizeable and significant effect on aggregate output (Bloom, D et al. 2004).

Health within the literature in relation to economic growth has also been linked to productivity (Raniz, G et al. 2000). Authors Ranis, Stewart, and Ramirez have argued that an improvement in the quality of the labour force can be viewed as an important contributor towards economic growth. It has been argued that health and education can be considered among some of the main determinants of growth of output, exports, and economic growth altogether and that a negative shock to the health sector and the population's health can negatively affect economic growth and aggregate output (Ranis, G et al. 2000). Furthermore, there have been a multitude of studies that link human capital, labour productivity and gross output. The research in the literature regarding how health influences economic growth largely links health with human capital and labour productivity and economic growth. This literature suggests that a deterioration in health leads to a decline in human capital and labour productivity which ultimately results in a fall in gross output and economic growth. Furthermore, it can be argued that an adverse public health shock can lead to a decline in labour productivity and economic growth as a whole.

The section to follow will provide a review of one such adverse public health shock in the form of COVID-19 and its impact on the globe's human capital, the economy and ultimately, global economic growth.

2.1.2 The impact of the COVID-19 pandemic on the global economy and the South African economy

In 2019, there were increasing levels of anxiety surrounding the impact of the trade war between the United States of America and China on the global economy, Brexit and the presidential elections held in America. However, these issues would soon be dwarfed by the introduction and spread of the COVID-19 virus. The Coronavirus disease (COVID-19) has

been described as a relatively new viral strain that was discovered in China in 2019 and had not been previously identified in humans and on the earth (Açikgöz, Ö & Günay, A. 2020). Initial literature on the virus has highlighted the severity of the virus and the rapidity of its spread. Following its introduction, the COVID-19 pandemic has been described as a global issue that has brought the global economy to its knees (Açikgöz, Ö & Günay, A. 2020). Beside the adverse effects that this pandemic has had on the population's health and the health sector, the pandemic has caused severe adverse effects on many economies across the globe (Açikgöz, Ö & Günay, A. 2020).

Following its spread, the pandemic negatively impacted employees, customers, supply chains and financial markets across the globe. Furthermore, the spread of the pandemic had a direct negative effect as well as indirect adverse effects which have been felt throughout the global economy. The virus has spread from country to country, and all nations across the globe have succumbed to it. Among the countermeasures introduced to curb the spread of the virus, social distancing was encouraged which ultimately resulted in the temporary shutdown of financial markets, business offices, businesses and events (Ozili, P & Thankom, A. 2020). Following the initial spread of the virus, global stock markets lost approximately US$ 6 trillion in wealth in the span of one week, from the 24th of February 2020 to the 28th of February 2020 (Ozili, P & Thankom, A. 2020). The sudden economic shocks that came were not only catastrophic, but also had spill over implications because they further resulted in global demand and supply shocks in nearly every area of human existence (Ozili, P & Thankom, A. 2020). Other countermeasures implemented to curb the spread of the virus, included the introduction of travel restrictions amongst other forms of interventions. The travel restrictions subsequently resulted in a fall in the demand of global travel. This reduction in demand resulted in a loss of over US$ 200 billion for the tourism industry globally, in 2020 alone (Ozili, P & Thankom, A. 2020). An additional consequence of the countermeasures put in place to limit the spread of the virus was a reduction in working hours. In light of the reduction in the number of working hours, there was also an increase in the number of jobs lost and a fall in productivity. The reduction in working hours resulted in severe employment losses in 2020 alone. The spread of the pandemic resulted in a loss of 114 million jobs relative to that of 2019 (ILO. 2021).

In addition to having an economic dimension, the pandemic has also affected the globe in a social as well as political dimension (Açikgöz, Ö & Günay, A. 2020). The spread of the pandemic further highlighted the inequalities that exist in society with those in a better

economic standing coping with the pandemic and the countermeasures better than those that in worse off conditions. Maital and Barzani (2020) have compared the COVID-19 pandemic to that of the past recessions that the world has experienced. Ahmed (2020) further corroborates this notion by highlighting the direct and indirect socio-economic impacts that the pandemic has had on the global economy and compares it to previous crises. To recover from the blow that the COVID-19 pandemic inflicted on South Africa's economy, it is imperative that policy makers look to an industry that is cross-cutting.

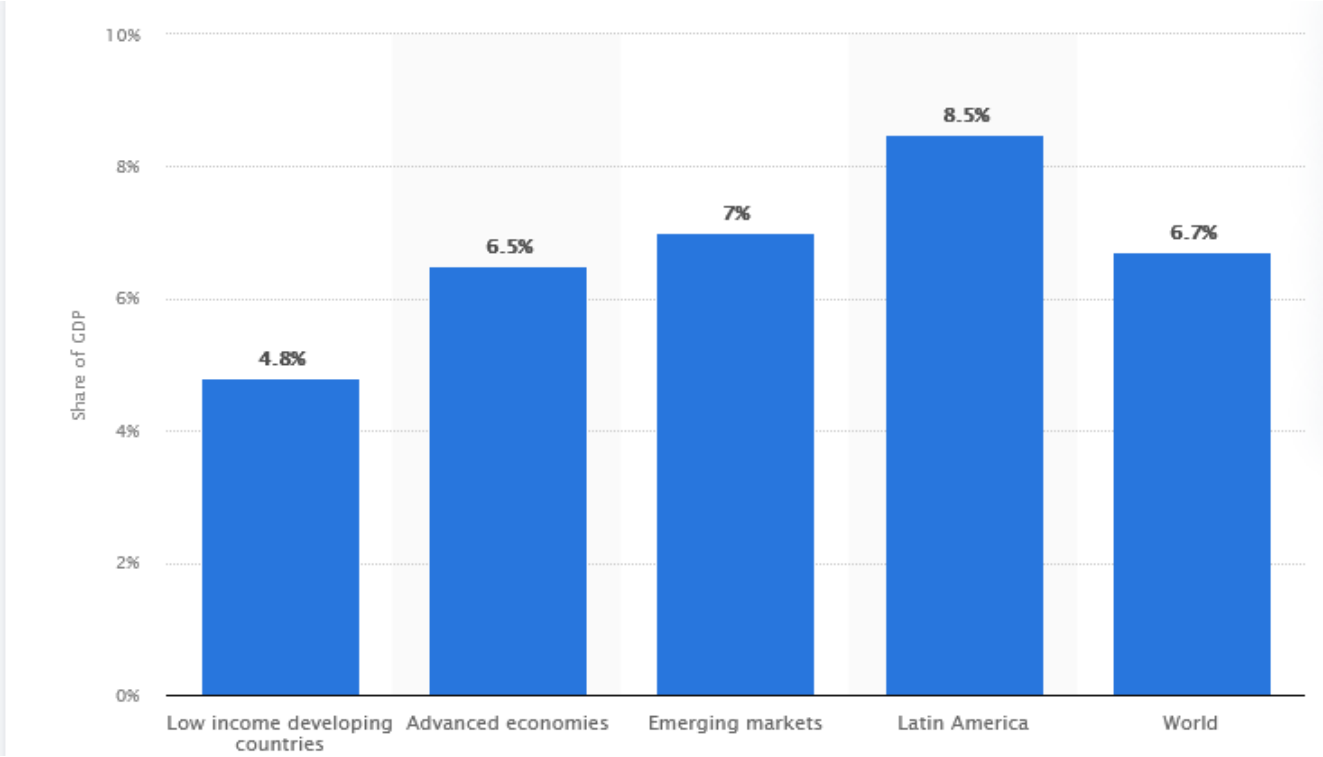
2.2. The importance of the tourism industry

The works of author Anamaria-Dinu acknowledge the importance of the role that the tourism industry has played in the global economy at the beginning of the century and how it has been considered as one of the world's most important sectors and the most important generator of income and jobs in this globalized economy. The importance of the tourism industry has been increasing and, in the future, it is believed that the global economy will be driven by three service industries namely, information technology, telecommunications industry and lastly the tourism industry (Dinu. 2016).

Upon its arrival, the COVID-19 pandemic placed a massive strain on the world's healthcare sector. Another critical issue of note concerning the COVID-19 pandemic has been the adverse spillover effects associated with it. Not only did the pandemic lead to a global decline in the level of output produced worldwide, but it also caused a decline in economic growth rates worldwide.

The diagram below, Figure 1 reflects the loss in the global gross domestic product due to the pandemic as a percentage for the year 2020 alone.

Figure 1: Share of Gross Domestic Product (GDP) lost as a result of the coronavirus pandemic (COVID-19) in 2020, by economy



Source: Statista

As illustrated in fig 1, a total amount of 6.7% of global GDP was lost due to the pandemic in 2020 alone. Latin America experienced the greatest loss in output with a loss of 8.5% of the region's Gross Domestic Product as a result of the coronavirus pandemic in 2020. Emerging markets were also severely affected with these markets experiencing a loss amounting to 7% of their Gross Domestic Product. Advanced economies experienced a loss of 6.5% of their GDP whereas low income developing countries experienced a loss of 4.8% of GDP. The figure for low income developing countries is lower than expected as it would be assumed that they would be slower to respond to the pandemic as compared to advanced economies. However, that figure could be due to limited access to the relevant data needed to calculate the figure.

A potential response to alleviate the economic problems arising from the pandemic could potentially be found in the tourism industry due to its crosscutting nature. In this increasingly globalized world, there has been discussion surrounding the role that tourism plays in achieving economic growth and its potential to become key driver of that growth. The tourism industry is one that has been known to record various economic, social, political and

other influences and it has been argued that the industry has provided itself an important position in the overall economic development of many countries (Cerovic et al. 2015). The tourism industry is regarded as an industry of great importance in this era and that is no different in South Africa (Akinboade, O and Braimoh, L. 2010). The improvement of the tourism industry can be viewed as a basic instrument in driving economic development, combating poverty whilst also advancing food security (Richardson, R. 2010). Additionally, it is important to note that the services sector represents a major part of the modern economic system today (Dinu. 2016). Not only is the tourism industry is regarded as the fourth largest in South Africa's economy, but the sector is also regarded as one of the fastest growing industries in South Africa (Akinboade, O and Braimoh, L. 2010). The reason behind the tourism industry being considered as one of the fastest growing economic sectors on the globe can be attributed to its constant evolution and the diversification that the sector has undergone(Dinu. 2016). The tourism sector separates itself from other sectors due to it being a cross-cutting sector that involves a wide variety of services and professions. The industry is one that is viewed as an activity that can contribute towards increasing employment due to its quick development as well as its labor intensiveness (Cerovic et al. 2015). The tourism sector is linked to many other economic activities and policies and due to its cross-cutting nature, is believed to have the ability to alleviate the negative economic impact and spillover effects associated with the pandemic (Akinboade, O and Braimoh, L. 2010). Tourism in industrialized and developed economies has produced a wide plethora of economic as well as employment benefits in many sectors related to the tourism industry from the construction industry to agriculture as well as telecommunications (Dinu. 2016). Previously, the tourism industry was not viewed as a considerable contributor to South Africa's GDP and was seen as a sector that only benefits the privileged. However, this view has changed considerably following the introduction of democracy. According to the Department of Environmental Affairs and Tourism, international tourism is viewed as a sector with high economic value (Akinboade, O and Braimoh, L. 2010). Besides the economic value that the tourism offers, the tourism industry also provides social as well as environmental benefits (Dinu. 2016). Furthermore, tourism is known to stimulate investment in new infrastructure, human capital and lastly competition (Brida, J & Pulina, M. 2010).

A study conducted by the World Travel and Tourism Council revealed that the direct contribution of the tourism industry globally to the gross domestic product evolution has exceeded the overall growth rate of GDP in 127 countries out of the 184 countries included in

the study (Dinu. 2016). The importance of tourism to economic growth has been highlighted throughout the literature. Tourism development carries many advantages with particular regards to job creation and the employment of people who provide tourism services. In 2015 alone, the tourism industry contributed 284 million jobs directly and indirectly (Dinu. 2016). Since the turn of the century, the tourism industry has become one of the major contributors in international commerce (Dinu. 2016). Globally, the tourism industry has come to represent one of the main income sources for many developing countries and emerging economies (Dinu. 2016). Recent literature indicates that within South Africa, the tourism industry's contribution to GDP has been gradually increasing following the turn of the millennium and thus a policy aimed at tourism recovery has the potential to aid in South Africa's economic recovery from the pandemic.

2.3. The relationship between tourism development and economic growth

A vital reason as to why studies into the causal relationship between tourism development and economic growth are so important is that it allows policy makers to make more accurate and informed decisions when planning.

The topic surrounding the causal relationship between tourism development and economic growth has been widely debated and widely discussed. There have been many empirical studies investigating the causal relationship between tourism development and economic growth. Many of these studies in the literature have made use of a wide variety of methodologies ranging from time series data analysis, cross sectional data analysis, input-output analysis as well as panel data analysis (Gwenhure, Y & Odhiambo, N. 2017). Some studies have noted that tourism cannot be established without adequate economic growth while other studies have highlighted the need for tourism development to achieve economic growth. The empirical literature regarding the topic revealed four potential hypotheses that have been verified across the globe (Gwenhure, Y & Odhiambo, N. 2017). As previously established, tourism has the potential to be a key driver of economic growth. However, this is not always the case and tourism as a variable does not always positively influence economic growth. An understanding of the direction in which these variables influence one another can prove essential to policy makers especially when drafting policy with the aim of achieving economic growth. A look into the literature reveals that the relationship between tourism and economic growth is not as linear as one would assume and different studies into the relationship have provided differing findings which at times contradict each other. One school of thought that believes in the neutrality hypothesis and argues that the two variables

have no influence on one another (Gwenhure, Y & Odhiambo, N. 2017). Other schools of thought have supported different hypotheses with some advocating for the tourism led growth hypothesis in which tourism development positively influences economic growth whereas, the other school of thought supports the growth led tourism hypothesis in which economic growth contributes positively towards tourism development and contributes to the growth of the tourism industry (Gwenhure, Y & Odhiambo, N. 2017). The final school of thought supports the feedback hypothesis in which a bilateral causal relationship exists between tourism development and economic growth and the two variables positively influence each other (Gwenhure, Y & Odhiambo, N. 2017).

Studies investigating the relationship between tourism development and economic development have typically revealed a positive relationship between the two variables. It is widely believed that tourism development has a positive relationship with economic growth and economic development and can be viewed as a driver of job creation and poverty alleviation.

2.3.1 Tourism led growth hypothesis.

In recent times, international tourism has played a significant role in the process of economic development in many countries (Akinboade, O and Braimoh, L. 2010). According to theory, tourism development is expected to positively impact the growth of any economy through foreign exchange earnings and job creation (Akinboade, O and Braimoh, L. 2010). In addition to being viewed as a driver of economic growth, tourism has been commonly viewed as a key driver of economic development serving to build economic welfare of countries (Webster & Ivanov. 2014). However, an opposing school of thought within the literature has suggested that the tourism industry's contribution to economic growth is minimal and insignificant. Furthermore, earlier literature argued that under a monopoly power framework, tourism has the potential to be welfare reducing (Hazari BR, Ng A. 1993). This idea was refuted as it was later established that tourism under the right conditions, tourism can be welfare improving. This is important to note for policy makers especially given that South Africa has one of the highest levels of inequality across the globe. With the South African economy still reeling from the impacts of COVID-19, it is important to consider policies that are welfare improving and those that create jobs.

As previously mentioned, tourism development has the potential to make direct and indirect contributions to overall GDP. It has been argued that tourism also creates business

opportunities as well as attracting international investment. It needs to be noted that this can be an essential tool in alleviating the economic effects of the pandemic through job creation and increased business opportunities. In recent years, various scholars have argued that thanks to globalization, the tourism sector has experienced significant growth (Nonthapot & Sakkarin. 2014). It is believed that economic activities and the overall standard of living can be improved through sustainable approaches to tourism (Nonthapot & Sakkarin. 2014). Qin (2018) identified a significant correlation between tourism income and economic growth further confirming the tourism led growth hypothesis. The findings of his paper emphasized the need to focus on tourism marketing promotion as a means of potentially sparking economic growth and expanding economic development (Qin, Y. 2018).

A 2015 study that spanned over a period of 10 years, that was aimed at assessing the tourism industry's contributions to overall economic growth in Western Balkan countries namely, Serbia Macedonia and Montenegro, Cerovic, Knezevic and Matovic (2015) found that the tourism industry makes a modest direct contribution to overall economic growth in the countries that they examined despite a continuous increase in the number of foreign international tourist arrivals. The results of the study revealed that the level of tourism's contribution to the overall economic growth of a country varies and is primarily related to diversity and the quality of supply (Cerovic et al. 2015). Despite how modest the contribution was, the study supports the tourism led growth hypothesis in the Western Balkan countries.

The notion of tourism development positively influencing economic growth is further supported by a 2008 regional study looking into the relationship between tourism and economic growth in OECD and non-OECD countries (Lee & Chang, 2008). This study confirmed what the general literature states, that a positive relationship between tourism developments and economic growth exists (Lee & Chang, 2008). While making use of panel data from Asia, Latin America as well as sub-Saharan Africa from 1990 to 2002, the authors found that economic growth was significantly influenced by the real exchange rate (Lee & Chang, 2008). This further supports the notion that the development of the tourism industry has the potential to significantly influence economic growth and development (Lee & Chang, 2008). Furthermore, this idea is further corroborated by a study in 2012 conducted in Greece which investigated the causal relationship between output growth and tourism expenditure (Georgantopoulos. 2012). Making use of a trivariate model, the author determined that the real exchange rate significantly influences output growth in Greece's economy (Georgantopoulos. 2012). The results from the study revealed that all variables used in the

study return to the long run equilibrium relationships and additionally identified a unidirectional causal relationship between tourism development and economic growth (Georgantopoulos. 2012).

Du and Alan (2016) conducted a study looking into whether tourism development acts as an additional determinant of income in the presence of the standard income determinants for example capital accumulation, or if the effects of tourism development in economic growth work through the standard income determinants instead (Du, D, & Alan, A. 2016). The study determined that tourism development influences the economic growth of destinations through the standard income determinants such as capital accumulation (Du, D, & Alan, A. 2016). Du and Alan (2016) aid in the understanding of the relationship between tourism development and economic growth as their work suggests that there needs to be a shift in the goals of tourism development set by policy makers from investing in tourism for its own sake to instead aim to ensure that tourism investments are made strategically to support standard income determinants. This is something that a policy maker needs to take into consideration when drafting the appropriate policies.

It is important to note that the degree of influence that tourism development has had on output growth and overall economic growth and development has differed depending on the location of the study and the choice of methodology used, hence the need for a more focused approach to these studies and the need for this study. In South Africa, it has been established that a positive relationship between tourism development and economic growth exists. Akinboade and Briamoh (2010) investigated the causal relationship between international tourism earnings and economic growth in South Africa. Making use of a granger causality test, their results revealed a positive relationship between international tourism earnings and economic growth in the long run. The discoveries from their paper revealed that international tourism earnings drive South Africa's real GDP growth in both the short and long run (Akinboade and Braimoh. 2010).

2.3.2. Growth led tourism hypothesis.

As previously mentioned, earlier, under this hypothesis, for tourism development to occur, policy makers need to focus on stimulating economic growth. A study investigating the relationship between tourism development and economic growth in South Korea confirmed the growth led tourism hypothesis (Oh, C. 2005). While making use of bivariate model, the

authors confirmed the growth led tourism hypothesis. A study conducted in Croatia investigating the causal relationship between tourism receipts and economic growth in Croatia further supported the notion of the growth led tourism hypothesis (Payne, J & Mervar, A. 2010).

Besides South Korea and Croatia, the existence of the growth-led tourism hypothesis has been confirmed in many other countries across the globe. A study investigating the impact of destination risk and currency valuation on the United States tourism growth nexus confirmed the growth led tourism hypothesis (Obi, P & Ogbeide, G. 2022). While making use of a recently developed non-linear autoregressive distributed by cointegration technique, the researchers found that negative shocks on the United States of America's GDP had a negative causal effect on tourism thereby supporting the growth led tourism hypothesis (Obi, P & Ogbeide, G. 2022). The study found evidence of a unidirectional causality running from GDP to tourism in the short run (Obi, P & Ogbeide, G. 2022).

The growth-led tourism hypothesis was also confirmed in Pakistan following a study that was exploring the linkages between carbon dioxide emissions, tourism indicators, income, renewable energy, and foreign direct investment over the period of 1970-2017 (Bano, S et al. 2021). The results of the study revealed that the growth-led tourism hypothesis alongside the tourism-led hypothesis exist in the long run for the country (Bano, S et al. 2021).

While making use of annual data spanning from 1980 to 2007, a study examining the short run and long run dynamic interactions between exports, imports, international tourism, and economic growth in Singapore revealed the existence of the growth-led tourism hypothesis (Lee, C. 2012). The existence of the growth-led tourism hypothesis is further supported by author Alper Aslan. In a study aimed at examining the relationship between tourism development and economic growth in the Mediterranean countries using the panel Granger causality test between 1995 and 2010, Aslan (2014) confirmed the existence of the growth-led tourism hypothesis. The results of the study revealed a unidirectional causal relationship going from economic growth to tourism development for Spain, Italy, Tunisia, Cyprus, Croatia, Bulgaria, and Greece (Aslan, A. 2014). The growth-led tourism hypothesis is supported in the case of the 7 countries mentioned (Aslan, A. 2014). However, the paper also found a bidirectional relationship between economic growth and tourism development for Portugal (Aslan, A. 2014). This is vital as it shows the importance of knowing which hypothesis exists in each country as it assists policy makers in making more accurate

decisions. Had it just have been assumed that the growth-led tourism hypothesis was across all of the Mediterranean countries, the policy makers in Portugal could have made policy that was not as effective in achieving whatever the goal of the policy was. The findings of this study show that it is not a one size fits all when it comes to the relationship between tourism development and economic growth and show the importance of first assessing what the relationship between tourism development and economic growth entails.

2.3.3. Feedback hypothesis.

The feedback hypothesis states that the two variables have a symbiotic relationship. Furthermore, the relationship between tourism development and economic growth goes both ways meaning that the variables influence each other. This relationship between the two if found throughout the literature.

A study conducted by authors Nonthapot and Sakkarin revealed a unidirectional relationship between tourism and economic growth. Whilst making use of data collected from 2000-2012 from the Greater Mekong subregion countries namely, Myanmar, Cambodia, Lao PDR, Thailand, and Vietnam as well as the Yunnan and Guangxi provinces of China, authors Nonthapot and Sakkarin identified a positive relationship between the two variables within that region (Nonthapot & Sakkarin. 2014). Using a panel data approach, the authors found that there exists a long run symbiotic relationship between the two variables which greatly suggests that tourism development can lead to economic development and vice versa. Their results also revealed a short-term causality that is unidirectionally running from international tourist arrivals to economic development thereby confirming the relationship between tourism development and economic development and further reaffirming the importance of tourism in economic growth and development (Nonthapot & Sakkarin. 2014). Their results suggest that the number of tourist arrivals is positively related to economic development and vice versa in this region in the long run.

Additionally, while making use of a Granger causality test, a symbiotic relationship between tourism development and economic growth was also found for South Korea (Chen and Chiou-Wei, 2009), Turkey (Demiroz and Ongan, 2005), Greece (Dritsakis, 2004) and Latin American countries (Lee and Chang, 2008). The feedback hypothesis is further supported in multiple studies across the globe which make use of different methodologies to reach the same conclusion. While investigating the causal relationship between tourism and economic

growth making use of panel error correction modelling in unison with the Granger causality test, the feedback hypothesis was further confirmed by Apergis and Payne (2012).

2.3.4. Neutrality hypothesis.

In contrast to the other three hypotheses, there have been fewer studies that confirm the neutrality hypothesis. An investigation into the relationship between tourism and economic growth spanning 42 years in Brazil form 1965-2007 confirmed the neutrality hypothesis (Brida et al. 2011). The study made use of a time series analysis. The neutrality hypothesis was further supported by a study investigating the same relationship in Greece with the study utilizing data from 1960-2010 and making use of the granger causality analysis (Kasimati, E. 2011).

As illustrated by the four hypotheses mentioned earlier, the topic of tourism's contribution to economic growth has been a widely debated one with each hypothesis being proven in different sections of the globe. The literature has revealed that the causal relationship between tourism development and economic growth has differed across the globe depending on the country of study and the choice of methodology used in each study (Gwenhure, Y & Odhiambo, N. 2017). The majority of the literature is in favour of the tourism led growth.

While it can be argued that in the right conditions, tourism development can be a driver of economic growth, there have been studies that have revealed that the contribution of the tourism industry can be modest. Aside from the direction in which each variable influences the other, another contested topic is the significance of the contribution tourism development makes to growth when it influences economic growth. It is important to note that although most of the literature supports tourism led growth, there have been studies that depict tourism's contribution to economic growth as minor or insignificant despite a positive unidirectional relationship existing. Furthermore, as previously mentioned, there is also literature that suggests that tourism development can be welfare diminishing despite the growth that it might bring.

Some of the studies investigating the relationship between tourism development and economic growth across the globe have revealed a positive long run association between the

two variables. However, the direction in which these variables influence one another in the short and long run have differed throughout the literature.

Chapter 3: Data and Methodology

This section will provide a detailed insight into the data used to tackle the topic of this paper. Additionally, this section will provide a step-by-step breakdown of the methods used to produce the results that will be discussed in the chapter to follow, whilst also providing justification for the choice of method. Lastly, this section will list the key assumptions underlying the model utilized in this paper.

3.1. Data

In this paper, we make use of a Social Accounting Matrix for South Africa that was released in 2015 and produced by van Seventer et al. (2019a). The data employed to construct the 2015 Social Accounting Matrix was built using South Africa's National Accounts, Supply Tables, Use Tables, household surveys and the labour force survey. The 2015 Social Accounting Matrix used in this study contains 62 production sectors (industries). Each of these sectors employs a total of four different forms of labour namely, labour that has completed primary school education from grades 1 to 7, labour that has completed middle school education in the form of grades 8-11, labour that has completed secondary education in the form of grade 12 and lastly, labour that has completed tertiary education in the form of a degree, diploma or a certification. . In addition to labour, each of these sectors employ capital to generate a grand total of 102 different commodities.

The income generated in the production sectors is divided among 14 different sorts of households. The Social Accounting Matrix is a tool that is primarily utilized in macroeconomic analysis.

3.1.1. Social Accounting Matrix (SAM)

A Social Accounting Matrix (SAM) is a comprehensive, economy-wide database that records data on transactions between economic agents in a given economy across time. The Social Accounting Matrix serves two purposes namely, it supplies data for economic modelling for multi-sectorial linear models or the more sophisticated Computable General Equilibrium (CGE) Models. The Social Accounting Matrix also displays a comprehensive and yet easy to understand picture of the economy at hand. The underlying principle behind a Social Accounting Matrix is the concept of the circular flow of income.

Social Accounting Matrices depict the entire cyclical flow of income in the economy, including how revenue is generated in production value chains and is given to families and the government via taxes, allowing households to purchase goods and services created in the economy thus completing the circular flow.

The Social Accounting Matrix combines the input-output accounts with the national income and product accounts also known as the "system of national accounts". Through this process, Social Accounting Matrices are able to provide a very detailed and easy to understand view of the economy. The method was created to represent the complexity of an interconnected economy by focusing on inter-industry links (supply chains), which were assessed using input-output tables and it is because of this that the Social Accounting Matrix is best suited to tackle the issues raised in this paper.

A Social Accounting Matrix (SAM) is an extension of earlier work that widens the input-output table to include or "endogenize" more related economic players than just industries. The Social Accounting Matrix is not a model in and of itself. It is instead a collection of macro-meso data gathered from all economic transactions in a socio-economic system over a one-year period. The double-entry approach is used when compiling a SAM due to it being an accounting system, hence the row totals that represent income must equal the column

totals that represent expenditure (van Seventer et al., 2019b). There have been three distinguishing characteristics of a Social Accounting Matrix that have been highlighted within the literature namely, its comprehensiveness, accuracy, and flexibility as a result of its ability to be disaggregated further (Round, 2003:261-5).

3.1.2 Structure of a Social Accounting Matrix

A social accounting matrix contains six basic groups of accounts namely, (1) activities and commodities, (2) production factors, (3) private institutions in the form of households and or firms, (4) public institutions in the form of government, (5) capital accounts and (6) the rest of the world (Mainar-Causapé, A et al. 2018)

The initial transaction follows production in this case within the tourism industry which requires intermediate goods or services as well as the main factors of production namely, labour and capital (Saluja, M & Yadav, B. 2004). These factors of production are contributed by both private and public institutions in the form of households, firms, and government, who in turn, receive factor payments as value added (Saluja, M & Yadav, B. 2004). The income earned by institutions is then either saved for future use or used as consumption expenditure (Saluja, M & Yadav, B. 2004).

The SAM will reflect the circular flow of income throughout the economy following each policy intervention that occurs within the tourism sector.

Production is separated into two parts namely, activities (industries) and commodities.

Below (figure 2) is an example of the structure of a social accounting matrix and a breakdown of how each of the accounts interact with one another.

Figure 2 Basic Structure of a SAM

		Activities	Commodities	Factors	Households	Private Corp.	Pub. Enter.	Govt.	Ind. Taxes	Capital A/C	ROW	Total
		1	2	3	4	5	6	7	8	9	10	
1	Activities		Gross output A1.2									Output
2	Commodities	Purchase of raw material A2.1			Household consumption A2.4			Govt. consumption A2.7		Gross Fixed Capital Formation A2.9	Exports A2.10	Aggregate demand
3	Factors	Value added A3.1									Net factor income A3.10	Factor Income
4	Households			Endowment Of HH A4.3				Govt. transfer, interest on debt A4.7			Net current transfer A4.10	Total Household income
5	Private Corp.			Operating Profits A5.3				Interest on debt A5.7				Income of Private Corporate
6	Pub. Enter.			Operating Surplus A6.3								Income of Public departmental
7	Govt.			Income from entrepr. A7.3	Income tax by households A7.4	Corporate taxes A7.5			Total indirect taxes A7.8		Net capital transfer A7.10	Total govt. earnings
8	Ind. Taxes	Taxes on intermediate A8.1			Taxes on purchases A8.4			Taxes on purchases A8.7		Taxes on investment goods A8.9	Tax on exports A8.10	Total Indirect taxes
9	Capital A/C			Depreciation A9.3	Household savings A9.4	Corporate savings A9.5	Public sector savings A9.6	Govt. savings A9.7			Foreign savings A9.10	Gross savings of economy
10	ROW		Imports A10.2									Foreign exchange payments
	Total	Total cost of production	Aggregate supply	Total factor endowments	Total use of household income	Private corporate income	Income of Public departmental	Aggregate govt. expenditure	Total indirect taxes	Aggregate investment	Foreign exchange receipts	

Source: (Saluja, M & Yadav, B. 2004)

3.2. Leontief model vs Computable General Equilibrium models

In the past, economists have utilized a wide array of methodologies, each with their own individual strengths and weaknesses, as a means of investigating various shocks and relationships throughout the economy. The choice of which methodology to utilise has been dependent on the question being researched. When analysing the economic impact of an event involving the tourism sector, there have been two main methods that have been

commonly used, namely, Input-Output models as well as Computable General Equilibrium models (Akkemik:790, 2011; Saayman & Rossouw, 2011:609).

A wide range of studies in the past have advocated for the use of Computable General Equilibrium models over the Leontief model. The Leontief model has been disparaged for its lack of robustness while the Computable General Equilibrium model has received praise for its flexibility as a model. However, the Computable General Model is more complex in nature and raises the challenge of finding a functional form that is appropriate for modelling economic behaviour. Additionally, due to the 'black-box' nature of the Computable General Equilibrium Models, it becomes difficult to recommend practical policy recommendations (Akkemik, 2011:792-3). For the purposes of this study, the Leontief model's advantages alongside the costs associated with Computable General Equilibrium model make the Leontief model more appealing for the purposes of this paper and so we have opted to make use of the Leontief model.

This study's analysis stands on two approaches. The first is a linear Input-Output Leontief model that generates the Leontief multipliers. The second approach builds on the first by employing a Leontief Social Accounting Matrix model to divide accounts into endogenous and exogenous accounts, resulting in the SAM multiplier (Saayman & Rossouw, 2011:609).

3.2.1. Leontief key assumptions

Key assumptions underlying the Input-Output Leontief model include the notion of fixed prices and the idea that production uses fixed proportions. Interindustry transactions are assumed to be endogenous while final demand is initially assumed to be exogenous. Furthermore, all institutions are assumed to have a constant average consumption inclination. To compute the multiplier, accounts must be configured as either exogenous or endogenous

to measure the impact of a shock. Lastly, the inputs required by each industry are expressed in monetary terms (Hewings, G & Sonis, M. 2009).

3.3. Framework for modelling

When it comes to analysing the direct, indirect, and induced flow of expenditure in an economy, economists employ the circular flow of income model. Because it is an economy-wide dataset that captures inter-industry transactions, a SAM depicts the circular flow of income in detail. The generation of income from productive activities, the transfer of income to the elements of production, the distribution of factor and non-factor income, and household commodity expenditures are all examples of these interactions (Round, 2003:261-5).

3.4 Input-Output model for mathematical Leontief

As stated earlier, the analysis section of this paper hinges on two concepts namely, the linear Input Output Leontief model which generates the Leontief multiplier, and the second concept entails the extension of the Leontief model. The second concept builds upon the foundations that have been established by the first by making use of a Leontief Social Accounting Matrix Model to generate the Social Accounting Matrix multiplier (Saayman & Rossouw, 2011:609). Using this method, it will become possible to track the direct, indirect and induced effects of the policies used in this paper on the tourism industry and the economy as a whole.

Each endogenous account's row can be added together to represent the income distribution mathematically:

Production Activities: $Y_{1=} R_{1,1} + R_{1,2} + X_1$

(1)

Factors of Production: $Y_{2=}\, R_{2,1} + R_{2,2} + X_2$

(2)

Institutions: $Y_{3=}\, R_{3,1} + R_{3,2} + X_3$

(3)

Each relevant R column is divided by the total for the respective column to calculate the technical coefficients which form the coefficient matrix (Matrix B), as shown below:

B= $\begin{pmatrix} \frac{R_{1,1}}{Y_1} & \frac{R_{1,2}}{Y_2} & \frac{R_{1,3}}{Y_3} \\ \frac{R_{2,1}}{Y_1} & \frac{R_{2,2}}{Y_2} & \frac{R_{2,3}}{Y_3} \end{pmatrix} = \begin{pmatrix} B_{1,1} & B_{1,2} & B_{1,3} \\ B_{2,1} & B_{2,2} & B_{2,3} \end{pmatrix}$

The Social Accounting Matrix model in matrix form is then denoted as follows:

$$M^{SAM} = \begin{pmatrix} B_{1,1} & B_{1,2} & B_{1,3} \\ B_{2,1} & B_{2,2} & B_{2,3} \end{pmatrix} \begin{pmatrix} Y_1 \\ Y_2 \\ Y_3 \end{pmatrix} + \begin{pmatrix} X_1 \\ X_2 \\ X_3 \end{pmatrix} = \begin{pmatrix} Y_1 \\ Y_2 \\ Y_3 \end{pmatrix}$$

(4)

Represented in its most general form:

Y=BY+X **(5)**

Where *Y* is the vector of production of the y_j industries composing the economic system. *X* is the vector of final demand and lastly, B represents the square matrix of technical coefficients.

Adjusting the formula to make X the subject for the formula, the following equation is reached:

X= Y-BY **(6)**

Therefore:

X=Y(I-B) **(7)**

From equation 7, we assume that ‘’**I**’’ represents the identity matrix. Following equation 7, we find the inverse, to determine the Leontief inverse also known as the multiplier formula below:

Y= $(I - B)^{-1}$. X **(8)**

The Leontief inverse matrix shows us how the economic system responds to a unit increment of the final demand.

Assume that M represents the matrix of multipliers and the X vector represent the impact or shock to the economy. The final result is denoted below.

M= $(I - B)^{-1}$. X **(9)**

The expected results from the shock or economic change are broken down into direct effects, indirect effects and induced effects. These three effects can be denoted as follows:

1. Direct effect: (I+B)
2. Indirect effect: $M^{I-O\ Leontief}$-(I+B)
3. Induced effect: M^{SAM}- $M^{I-O\ Leontief}$

Before diving into the impact that each policy has on the tourism industry has, it is important to discuss the interlinkages between industries within the economy. As previously mentioned, the importance of the social accounting matrix lies in its ability to capture the linkages between industries within the economy. The social accounting Matrix used in this paper was

split into activities and commodities where activity represented the industry and commodity represented the products that can be produced by that industry. Below is an excerpt of a simple coefficient matrix. This should go to the methodology and data. This is where such discussion should take place.

Table 1 Coefficient Matrix

	A:Agriculture	A:Manufacturing	C:Agriculture	C:Manufacturing
A:Agriculture(A)	0	0	0,73	0,29
:Manufacturing(A)	0	0	0,18	0,43
Agriculture(C)	0,25	0,4	0	0
Manufacturing(C)	0,14	0,12	0	0
Labour Input Coefficient	0,61	0,48	0,00	0,00

Source: International Food policy Research Institute (2009)

The above coefficient matrix represents that of two industries, Agriculture and Manufacturing. These industries are referred to as activities, denoted by "A" and each activity produces commodities as denoted by the rows and columns that contain a "C".

The activity columns show how much would be needed in terms of intermediate inputs following an increase in demand of the commodity. An example of this would be to produce an extra unit of agricultural goods, the agricultural industry would need 0.25 units worth of agricultural goods, 0.14 units of manufacturing goods and lastly, 0.61 units of labour value addition.

The Commodity columns show how much of the good is produced locally for example, the agriculture column shows that 73% of the agricultural goods in stock are produced locally and 27% of the agricultural goods in stock are sourced from imports.

This will play an important role further into this chapter as we analyse the impact of each of the three shocks and how they impact the demand for intermediate inputs across industries and the economy as a whole. The section to follow will analyse the impact of each of the three shocks, using the results from the coefficient matrix as well as the Leontief inverse.

3.6. The Tourism Sector Recovery Plan

As previously mentioned, the COVID-19 pandemic had a severe negative impact on South Africa's tourism sector and the economy as a whole. The Tourism Sector Recovery plan was created in response to the pandemic's impact on the tourism sector as a means to remedy the neggative effects associated with the pandemic. The Tourism Sector Recovery Plan's main objectives are to protect and rejuvenate supply, re-ignite demand, and strengthen enabling capability for long term sustainably while mitigating the effects and consequences associated with the pandemic on the economy. Amongst its other interventions, this paper will examine the effects of the Corporate Support policy, Business Enablement policy, and lastly, Tourist Experience policy on the tourism industry and the economy as a whole.

The Corporate Support policy seeks to create a conducive environment to facilitate the recovery of the tourism sector by offering effective support services to South African Tourism. The Corporate Support policy seeks to ensure strategy development and integration with business performance monitoring and evaluation. From a total budget of R1.4 billion, allocations were made to the 5 programmes. An amount of R126 million was allocated to Corporate Support.

The Business Enablement policy serves two purposes namely to enhance the collaboration between various stakeholders within the tourism industry as well as provide central intelligence as a means of support in evidence-based decision making with in the tourism

industry. By enhancing the collaboration between various stakeholders, the Business Enablement policy will improve the chances of the tourism sector recovering. Moreover, enhancing the collaboration between stakeholders will lead to more informed decisions being made regarding the growth of the tourism sector as the various perspectives of the stakeholders will be taken into consideration. The success of delivering the mandate of tourism development depends on the coordination of the various stakeholders. From the budget of R1.4 billion, the Business Enablement policy received an allocation of R84.9 million.

Lastly, the purpose of the Tourist Experience policy is to ensure that the quality of the delivery of the Tourist Experience is maintained and even exceeded. The policy seeks to ensure that tourists and visitors are left satisfied after experiencing South African tourism. This policy seeks to ensure that visitors are left satisfied through the use of quality assurance of the services used by the tourists to improve the overall perception of South Africa as a quality destination. From a total budget of R1.4 billion, the Tourist Experience policy was allocated R65 million.

Below is a table summarising each of the 3 policies as well as the amount allocated to each of the three policies.

Table 2 : Tourism Recovery Policies

Policy	**Aim**	**Allocation**
Business Enablement	• To provide centralised tourism intelligence to support intelligence-based decision-making. • To enhance the collaboration between various stakeholders within the tourism industry	R 84.9 million
Corporate Support	• To offer support services to businesses within the tourism sector. • To provide strategy development and integration with business performance monitoring and evaluation within South African Tourism to ensure that that businesses within the tourism sector receive the most effective strategies to combat the effects of COVID-19.	R 126 million
Tourist Experience	• To ensure that the quality of the delivery of the Tourist Experience is maintained and even exceeded for both local and international tourists.	R 65 million

Chapter 4: Results & Analysis

As mentioned in the previous chapter, the purpose of this study is to investigate how three policy shocks influence South Africa's tourism sector and the economy as a whole. The first was an allocation of R126 million by the government of South Africa, dedicated towards the Corporate Support policy as highlighted in Table 2. The second policy shock reflected an allocation of R84.9 million dedicated towards Business Enablement and the final policy shock reflected an allocation of R65 million dedicated towards improving the Tourist Experience. This section will present the findings from this study based on the data from South Africa's 2015 Social Accounting Matrix and the methodology.

The section to follow will detail the impact that each of the policies associated with tourism sector recovery plan has on the tourism sector by illustrating the direct, indirect as well as the induced effects associated with each shock. Following this, the section will provide a detailed explanation of how the Tourism Sector Recovery Plan affected the rest of the economy.

4.1.1. The impact of the Corporate Support policy on the tourism sector

The table below (table 3) provides a break-down of the total impact of the tourism recovery policy shock on the tourism industry. The total impact is broken down into three parts namely, the direct impact, the indirect impact and lastly, the induced effect. The shock in question is an allocation of R126 million dedicated towards Corporate Support and the investment in infrastructure in the communications and technology space.

Table 3: Economic Impact of Tourism Recovery Plan on Tourism Industry- Corporate Support

Shock 1: Corporate support	Direct Impact	Indirect Impact	Induced Impact	Total Impact
	R million	R million	R million	R million
Tourism Characteristic Products	**5,015**	**12,581**	**14,363**	**31,960**
Accommodation services	0,232	0,338	1,149	1,718
Restaurants and Similar	0,000	1,059	1,960	3,019
Passenger transport	4,784	1,533	3,965	10,281
Railway passenger transportation services	0,000	0,021	0,007	0,029
Road passenger transportation services	0,000	8,600	6,223	14,823
Water transportation services	0,000	0,079	0,064	0,143
Recreational, cultural and sporting services	0,000	0,950	0,995	1,946
Tourism Connected Products	**2,441**	**1,467**	**10,201**	**14,109**
Retail sales of food	0,629	0,204	1,008	1,842
Retail sales of beverages	0,000	0,093	2,799	2,892
Retail sales of tobacco products	0,000	0,344	1,570	1,914
Retail sales of clothing	0,187	0,157	1,759	2,104
Retail sales of footwear	0,000	0,081	0,698	0,779
Retail sales of leather goods	0,000	0,091	0,277	0,369
Retail sales of pharmaceutical and medical goods	0,590	0,310	1,441	2,340
Retail sales of household furniture and appliances	1,035	0,187	0,648	1,870
Total	**7,457**	**14,048**	**24,564**	**46,069**

The direct impact reflects the first round of effects resulting from the investment of R126 million from the Corporate Support policy, on the tourism sector's output (Breisinger, C et al. 2009) . The direct impact pertains to the sector that is directly affected by the shock. The indirect impact arises from the linkages an industry might have to other industries within the economy (Breisinger, C et al. 2009). These linkages can either arise from production or consumption. The induced impact simply refers to the value that results from the household spending of labour income. Previously, when income was exogenous, it was assumed that whenever factor payments were made to labour, there would be no additional spending and instead, workers would save, and this would act as a leakage. However, induced effects arise from the assumption that workers will then take that factor income and use it for consumption, thus feeding back into the circular flow of income.

The impact of the Corporate Support programme on the tourism industry is revealed to be positive in the above table (Table 3). Both tourism characteristic products and tourism connected products reflect a positive balance which is a sign of an increase in output and economic growth. Under tourism characteristic products, passenger transportation services experience the largest direct impact from the Corporate Support programme, with an increase in output of R4.784 million. This is followed by accommodation services which experience an increase in output valued at R0.232 million. The other industries that fall under the category of tourism characteristic products do not experience a direct effect.

Following the introduction of the Corporate Support policy, tourism connected products experienced an increase in growth with the output levels increasing by R2.441 million reflecting the direct impact of the policy. The highest grossing product in this category was Retail sales of household furniture and appliances with an increase in output amounting to R1.035 million, thus accounting for forty-two percent of the growth of tourism connected products. Retail sales of food had the second largest increase in output attributed to the direct impact of Corporate Support with an increase in output of R0.629 million. The direct impact of the Corporate Support policy on the retail sale of clothing was R0.187 million. These increases suggest an increase in the size of the tourism industry.

The indirect impact on tourism characteristic products and tourism connected products was also positive. Despite passenger transportation services experiencing the largest direct impact of the Corporate Support policy, road transportation services experienced the largest indirect impact with an increase of R8.6 million through backward linkages. This implies that following the introduction of this policy, road travel has seen a gradual increase, possibly suggesting an increase in local tourism consumption. Passenger transportation services also saw an increase in output amounting to R1.533 million as a result of the indirect impact of the Corporate Support policy. Restaurants experienced an increase in growth of output amounting to R1.066 million as a result of the indirect impact arising from the Corporate Support programme. The remaining tourism characteristic products experienced an increase of growth amounting to less than R1 million each as a result of the indirect impact of the Corporate Support policy. Tourism connected products experienced a cumulative increase in output of R1.467 million with the retail sales of tobacco products being the largest contributor.

Road transportation services enjoyed the highest level of growth in output as a result of the induced effect arising from the Corporate Support initiative with an increase valued at R6.223 million. The implications of this suggest that an increasing number of workers began using part of their factor incomes to travel on the road instead of saving. Passenger transportation experienced the second highest increase in output resulting from an induced effect under tourism characteristic products with an increase of R3.965 million. Restaurants experienced an increase in output of R1.960 million. Accommodation enjoyed an increase in output as a result of the induced effect amounting to R1.149 million. Under the category of tourism connected products, the retail sale of beverages had the largest increase in output with an increase of R2.799 million.

The products that are generally used as a metric to measure the performance of the tourism industry improved following the introduction of the Corporate Support policy. However, the magnitude of the growth in output differed by the product.

4.1.2. The impact of the Business Enablement policy on the tourism sector

Table 4 provides a break down the total impact of the Business Enablement policy shock on the tourism industry. This shock is a result of an investment made by the government of R84.9 million towards the Business Enablement policy.

Table 4: Economic Impact of Tourism Recovery Plan on Tourism Industry- Business Enablement

Shock 2: Business enablement	Direct Impact	Indirect Impact	Induced Impact	Total Impact
	R million	R million	R million	R million
Tourism Characteristic Products	**0,127**	**5,998**	**70,543**	**76,668**
Accommodation services	0,000	0,258	0,666	0,924
Restaurants and Similar	0,127	0,388	0,998	1,513
Passenger transport	0,000	1,701	1,118	2,819
Railway passenger transportation services	0,000	0,008	0,003	0,012
Road passenger transportation services	0,000	3,331	2,080	5,411
Water transportation services	0,000	0,042	0,023	0,065
Recreational, cultural and sporting services	0,000	0,270	65,654	65,924
Tourism Connected Products	**0,000**	**1,604**	**5,362**	**6,967**
Retail sales of food	0,000	0,206	0,509	0,715
Retail sales of beverages	0,000	0,077	1,341	1,417
Retail sales of tobacco products	0,000	0,295	0,701	0,996
Retail sales of clothing	0,000	0,484	0,530	1,014
Retail sales of footwear	0,000	0,086	0,675	0,760
Retail sales of leather goods	0,000	0,051	0,305	0,356
Retail sales of pharmaceutical and medical goods	0,000	0,118	0,767	0,884
Retail sales of household furniture and appliances	0,000	0,288	0,535	0,823
Total	**0,127**	**7,602**	**75,906**	**83,634**

The impact of the Business Enablement programme on the tourism industry is shown to be positive in table 4. Both tourism characteristic products and tourism connected products reflect a positive balance which indicates growth in the tourism sector. Under tourism characteristic products, restaurants and similar experience the largest and sole direct impact from the Business Enablement, with an increase in output of R0.127 million. All other products under both the categories of tourism characteristic products and tourism connected products do not reflect any direct impact and instead experience no changes in the level of output.

Despite the direct impact yielding a low increase in output following the introduction of the Business Enablement policy, the tourism characteristic products and tourism connected products do indeed experience a positive indirect impact as well as an induced impact

resulting from the policy. The indirect impact on tourism characteristic products and tourism connected products was also positive. Although restaurants and similar experienced the sole increase as a result of the direct impact of the Business Enablement policy, road transportation services experienced the largest indirect effect among the tourism characteristic products with an increase in output amounting to R3.331 million. This increase was then followed by the passenger transportation which had an increase in output amounting to R1.701 million. These increases in output suggest an increase in travel that can be indirectly associated with an increase in tourism in general. Restaurants and similar experienced the third largest increase due to the indirect impact of the Business Enablement policy with an increase in output amounting to R0.388 million. Although the increase in output is below R1 million, this increase still exceeds that of the increase restaurants and similar experienced as a direct impact of the Business Enablement policy. Recreational, cultural, and sporting services experience the next largest increase in output levels with an increase of R0.270 million. Accommodation services experienced an increase in output of R0,258 resulting from the indirect impact of the Business Enablement policy. As previously mentioned, tourist connected products also experienced an increase in the level of output with the retail sale of clothing experiencing the largest increase in output amounting to R0.484 million, reflecting the indirect impact Business Enablement had on the retail sales of clothing. Tourism connected products had a cumulative increase in output of R1.604 million as a result of the indirect impact that the Business Enablement industry had on the tourism industry.

The cumulative induced impact following the introduction of the Business Enablement policy was positive. Furthermore, this induced impact was greater than both the direct impact and the indirect impact with the largest increase in output arising from the recreational, cultural, and sporting services, with an increase amounting to R65.654 million. The induced impact accounted for the majority of the total impact associated with the Business Enablement policy. Although the other products each experienced an increase in output, their cumulative increase was not as large as the increase that recreational, cultural, and sporting services enjoyed. That increase implies that employees are using the factor payments that they receive as part of the production process, to consume more recreational, cultural, and sporting services following the introduction of the Business Enablement policy.

The products that are generally used as a metric to measure the performance of the tourism industry reflect an improvement and this can be attributed to the introduction of the Business

Enablement policy. However, the magnitude of the growth in output differed by the product and the direct impact of the policy was significantly lower than that of the Corporate Support Policy with the Corporate Support policy having a higher direct impact by R4.888 million. The Corporate Support policy also seems to have a higher indirect impact on the tourism characteristic products and the tourism connected products as compared to that of the Business Enablement policy. Despite this, the Business Enablement policy does produce a significantly greater induced impact as compared to that of the Corporate Support policy.

4.1.3. The impact of the Tourist Experience policy on the tourism sector

Table 5 breaks down the total impact of the Tourist Experience policy shock on the tourism industry. This shock saw the government investing R65 million towards ensuring that the Tourist Experience was the best it could have been.

Table 5: Economic Impact of Tourism Recovery Plan on Tourism Industry- Tourist Experience

Shock 3: Tourist experience	Direct Impact	Indirect Impact	Induced Impact	Total Impact
	R million	R million	R million	R million
Tourism Characteristic Products	**0,223**	**69,493**	**6,952**	**76,668**
Accommodation services	0,223	0,160	0,541	0,924
Restaurants and Similar	0,000	0,582	0,931	1,513
Passenger transport	0,000	0,877	1,942	2,819
Railway passenger transportation services	0,000	0,008	0,004	0,012
Road passenger transportation services	0,000	2,379	3,032	5,411
Water transportation services	0,000	0,034	0,031	0,065
Recreational, cultural and sporting services	0,000	65,452	0,472	65,924
Tourism Connected Products	**1,137**	**0,896**	**4,934**	**6,967**
Retail sales of food	0,116	0,109	0,490	0,715
Retail sales of beverages	0,005	0,058	1,355	1,417
Retail sales of tobacco products	0,081	0,155	0,760	0,996
Retail sales of clothing	0,090	0,069	0,855	1,014
Retail sales of footwear	0,358	0,064	0,339	0,760
Retail sales of leather goods	0,099	0,124	0,133	0,356
Retail sales of pharmaceutical and medical goods	0,000	0,194	0,690	0,884
Retail sales of household furniture and appliances	0,388	0,123	0,312	0,823
Total	**1,360**	**70,389**	**11,886**	**83,634**

The impact of the Tourist Experience programme on the tourism industry is shown to be positive with the tourism sector as showing positive changes as reflected in the above table. Both tourism characteristic products and tourism connected products reflect a positive balance which is a sign of growth. Under tourism characteristic products, only the accommodation services experience a positive increase of output as a result of the direct impact from the Tourist Experience programme, with an increase in output of R0.223 million. The other industries that fall under the category of tourism characteristic products do not experience a direct effect and thus see no change in the level of output.

Tourism connected products also experienced an increase in growth with the output levels increasing by R1,137 million as a result of the direct impact of the policy. The highest grossing product in this category was Retail sales of household furniture and appliances with an increase in output amounting to R0.388 million, thus accounting for 34% of the growth of tourism connected products. Retail sales of footwear had the second largest increase in output attributed to the direct impact of Tourist Experience policy with an increase in output of R0.358 million. The direct impact of the Tourist Experience policy on the retail sale of food was R0.116 million. These increases suggest an increase in the size of the tourism industry. The direct impact resulting from the investment towards the Tourism Experience policy was R0.099 million.

The indirect impact on tourism characteristic products as well as that of tourism connected products was also positive. Despite accommodation services experiencing the largest direct impact of the Tourist Experience policy, recreational, cultural, and sporting services experienced the largest indirect impact with an increase of R65.452 million through linkages. The implies that following the introduction of this policy, there has been an increase in the demand for recreational, cultural, and sporting services and also that there has been growth in the tourism industry. Road transportation services also saw an increase in output amounting to R2.379 million as a result of the indirect impact of the Tourist Experience policy. Restaurants experienced an increase in growth of output amounting to R0.582 million as a result of the indirect impact arising from the Tourist Experience programme. The remaining tourism characteristic products experienced an increase of growth amounting to less than R1 million each as a result of the indirect impact of the Corporate Support policy. Tourism connected products experienced a cumulative increase in output of R0.896 million.

Road transportation services enjoys the highest level of growth in output as a result of the induced effect arising from the Tourism Experience initiative with an increase valued at R3,032 million. This implies that an increasing number of workers are using their factor incomes to travel on the road. Passenger transportation has the second highest increase in output resulting from an induced effect under tourism characteristic products with an increase of R1,942 million. Restaurants experienced an increase in output of R0.931 million. Accommodation enjoyed an increase in output as a result of the induced effect amounting to R0.541 million. Under the category of tourism connected products, the retail sale of beverages had the largest increase in output with an increase of R2.799 million.

The products that are generally used as a means of assessing the performance of the tourism industry improved following the introduction of the Tourist Experience policy. However, the magnitude of the growth in output differed by the product.

4.2. Impact of the tourism recovery plan on the economy.

Table 6 reflects the output effects on the economy as well as the output multipliers for each of the three policies.

Table 6: Output Effect and Multiplier Effect by policy shock

	Corporate Support	**Business Enablement**	**Tourist Experience**
Output effect	R234.618 million	R133.003 million	R122.936 million
Output multiplier	1.862	1.567	1.891

The output effect refers to the effect of an increase in output on the use of a particular input, holding input prices constant. The increase in output results in an increase in the demand for the specific inputs needed to produce the output. For the Corporate Support policy for example to be realised and for effective support services to be rendered to South African Tourism, certain inputs from differing industries were required and which resulted in an increase in output for these industries providing the inputs required for Corporate Support to be achieved. The Corporate Support programme yielded the greatest output effect among the three policies with an output effect reflecting the overall increase in output produced of R234.618 million. This was then followed by the Business Enablement policy with an overall increase in output valued at R133.003 million and lastly, the Tourist Experience policy with an overall increase in output produced amounting to R122.936 million. However, despite the Business Enablement policy yielding a greater output effect as compared to the Tourist Experience policy, the Tourist Experience policy yielded a greater output multiplier as

compared to both the Business Enablement policy and the Corporate Support policy respectively. Though the difference in multipliers between the Tourist Experience Policy and the Corporate Support policy is marginal with the difference being 0.029. The Corporate Support policy yields the second highest output multiplier with a multiplier of 1.862, beating that of the Business Enablement by 0.295. The Business Enablement policy has the lowest output multiplier with a multiplier of 1.567.

Following the introduction of each of the three policies to the tourism sector, there is not only an increase in the output produced in the tourism industry, but also an increase in output produced across the economy due to an increase in demand for intermediate inputs as well as linkages throughout the economy. The multiplier amounts denoted in table 6 show that each of the three policies are effective in increasing output across the economy. However, the Tourism Experience policy generates the highest multiplier despite having the lowest allocation compared to the other two policies.

4.2. 1. Shock 1: Corporate Support

A column from the Leontief Inverse shows the total increases in gross output that are required, directly and indirectly to meet a one unit increase in final demand for the sector that the column represents. Following the allocation of R126 million rand dedicated towards the Corporate Support policy and the investment in the infrastructure of the ICT industry, a positive shock was observed.

The Corporate Support policy resulted in a shock to the ICT industry. This increase in demand lead to the industry demanding intermediate inputs from other industries, and those industries in turn, increased production to match the demand for intermediate inputs. Looking at the Leontief inverse following investment of R126 million, it is clear that other industries were also affected.

The figure below reflects (Figure 3) the gross output increase in key sectors linked to the tourism value chain required, directly and indirectly to meet a R126 million increase in final demand in associated with the Corporate Support policy South Africa.

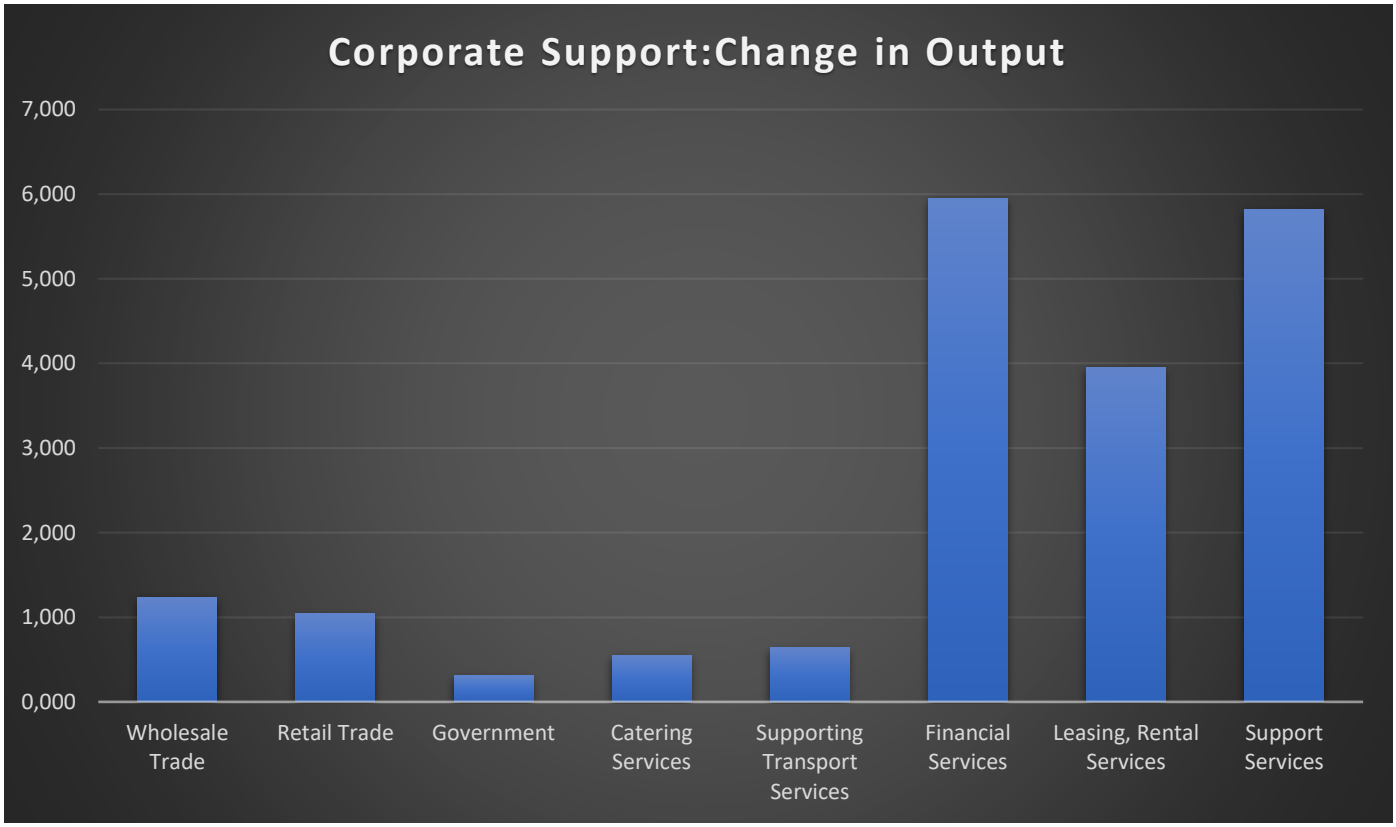


Figure 3: Changes in output in sectors linked to Tourism Value Chain (Corporate Support)

From the above diagram, it is clear that financial services enjoyed the largest benefits with an increase in demand of R5.953 million. This was then followed by support services which experienced an increase in demand of R5.817 million following the introduction of the Corporate Support policy. Leasing and rental services saw an increase in demand amounting to 3.957 million. The Wholesale trade and commission trade industry increased its output by R1.236 million. The retail trade industry saw an increase in output amounting to R1.043 million. The demand for supporting transport services increased by R0.639 million. Catering services saw an increase in demand of 0.549 million. Lastly, the public sector saw the smallest increase with output increasing by R0.310 million.

The effects of the Corporate Support policy were felt throughout the economy. The investment of R126 million into Corporate Support meant that the ICT industry had to increase its output. To do so, it required more intermediate inputs which resulted in an increase for the demand for intermediate inputs from the other sectors. However, figure 3

specifically highlights the increases in gross output for key industries associated linked to the tourism value chain. Appendix 2 illustrates the increase in gross output following the Corporate Support policy for the whole economy.

As previously mentioned, in the wake of the first shock, the allocation of R126 million, there is an overall increase in the gross output within the sector as well as throughout the economy. Besides the key sectors linked to the tourism value chain detailed in figure 3, other sectors in the economy also experienced significantly positive impact as a result of the increase in the demand for intermediate inputs. While it cannot be denied that many sectors across the economy were impacted by the Corporate Support policy, the degree to which they were impacted differs industry by industry. Below is a diagram illustrating which industries experienced the largest increases in output following the introduction of the Corporate Support policy.

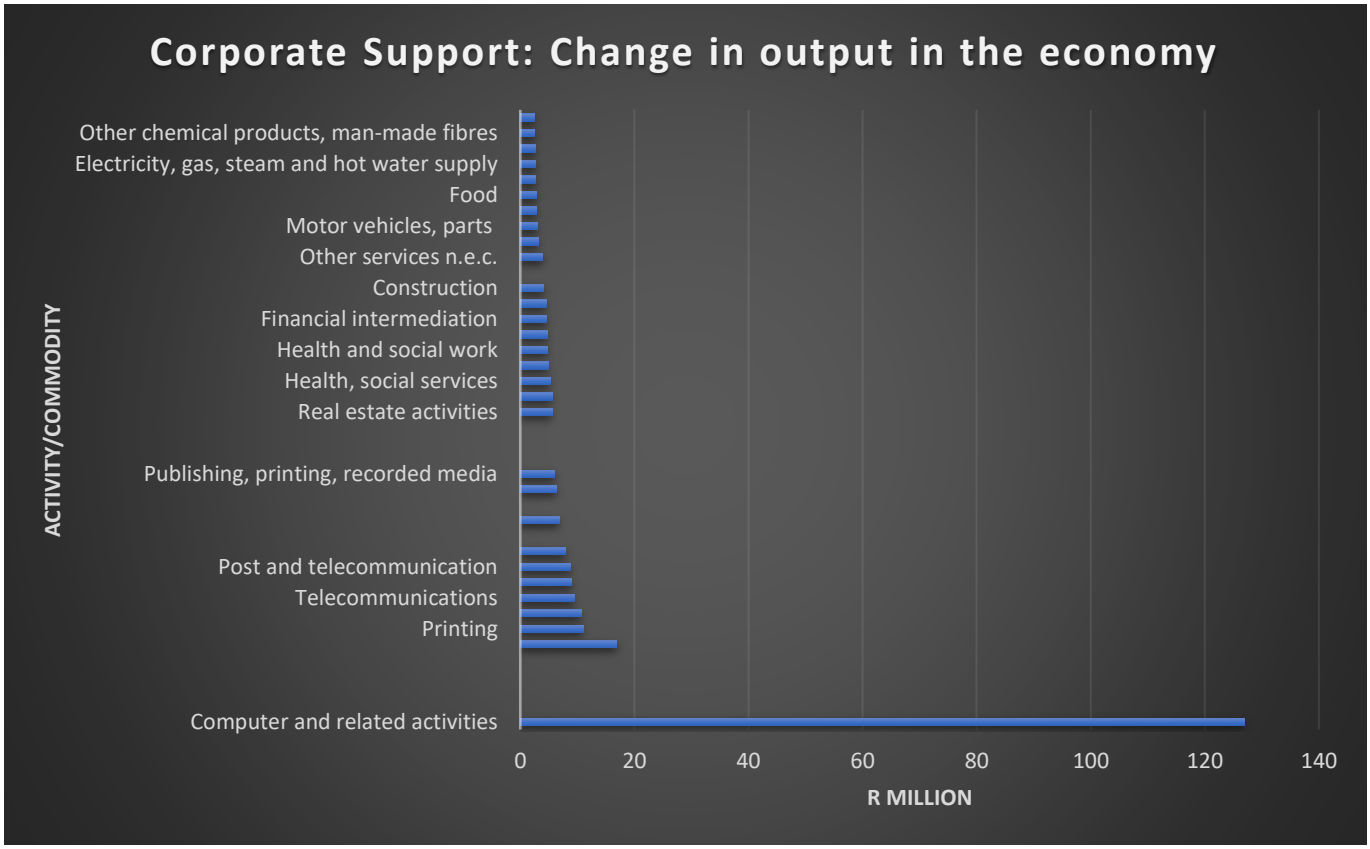


Figure 4: Changes in Output throughout the economy (Corporate Support)

There was an increase in the demand for trade services amounting to R85.377 million following the introduction of the Business Enablement policy.

The introduction of the Corporate Support policy led to industries increasing their output throughout the economy. Additionally, the introduction of the policy resulted in an increase in the demand for commodities in throughout the economy. The computer and related activities industry experienced the highest increase of output amounting to R126.971 million as a result of the Corporate Support policy. The R126 million is a direct result of the Corporate Support policy and the R0.971 million is an indirect result of the shock. The Coke oven, petroleum refineries industry increased the output that it produced by R6.316 million. The demand for printing saw an increase of R11.017 million. In producing output following the Corporate Support policy, R11.0.17 million worth of printing was required. Other business activities enjoyed an increase in output amounting to R10.670 million. The demand for telecommunications one of the largest increases in demand with an increase of R9.492 million. Paper products experienced an increase in demand amounting to R8.981 million. The level of output produced by the post and telecommunication industry increased by R8.825 million. Other business services experienced an increase in demand amounting to 7.961 million. Real estate services saw an increase in demand of R6.870 million. The value of output produced by the Publishing, printing, recorded media industry increased by R6.011 million.

Real estate activities experienced an increase in output amounting to R5.64 million. The value of output produced by the paper industry increased by R5.614 million. Health and social services experienced an increase in demand of R5.250 million. Other mineral commodity inputs saw an increase in the demand amounting to R4.897 million. The health and social work sector saw an increase in output produced amounting to R4.779 million. Non-observed, informal, non-profit, households saw an increase of output amounting to R4.600 million. The financial intermediation experienced an increase its demand by R4.673 million. The construction industry saw in increase in output amounting to R4,113 million. . Other services n.e.c. enjoyed an increase in demand amounting to R3.944 million. The demand for radio and television increased by R3.153 million. The remaining industries and commodities each experienced an increase amounting to less than R3 million.

Although an increase in output produced by the aforementioned industries is observed, the change in output does not equate to the change in demand for the commodities. An example of this is how despite an increase in output in real estate activities amounting to R5.64 million, the commodity of real estate services experiences an increase in demand amounting to R6.87 million. The difference is attributed to imports, revealing that although output

increases, as do leakages in the form of imports of commodities to meet the increasing demand.

The resulting increases in output of intermediate inputs from the different industries caused an overall output effect of R 234.618 million. Additionally, this increase in the quantity produced from these industries resulted in an output multiplier of 1.862051107.

The introduction of the Corporate Support policy managed to generate an increase in demand for commodity inputs throughout the economy which led to an increase in demand for different commodities. The increase in demand for commodity inputs also resulted in an increase in demand for labour which increased employment. The Corporate Support policy increased demand for some commodity inputs that were not expected for example, the increase in demand for fish commodities amounting to R0.105 million. This was most likely through the demand for intermediate inputs and though fish commodities may not have been an immediate intermediate input to the ICT industry, one of the intermediate inputs demanded following the Corporate Support policy may have demanded an input that demanded an input that was linked to fish commodities and so that specific commodity saw an increase. Some of these commodities experienced an increase in demand through backward linkages.

4.2.2. Shock 2: Business Enablement

The diagram below denotes the effects of the second shock, namely the R84.9 million dedicated towards the Business Enablement policy, on the sectors linked to the tourism value chain. The below diagram reflects the increase in output resulting in an increase in the demand for intermediate inputs to ensure that the Business Enablement policy is achieved.

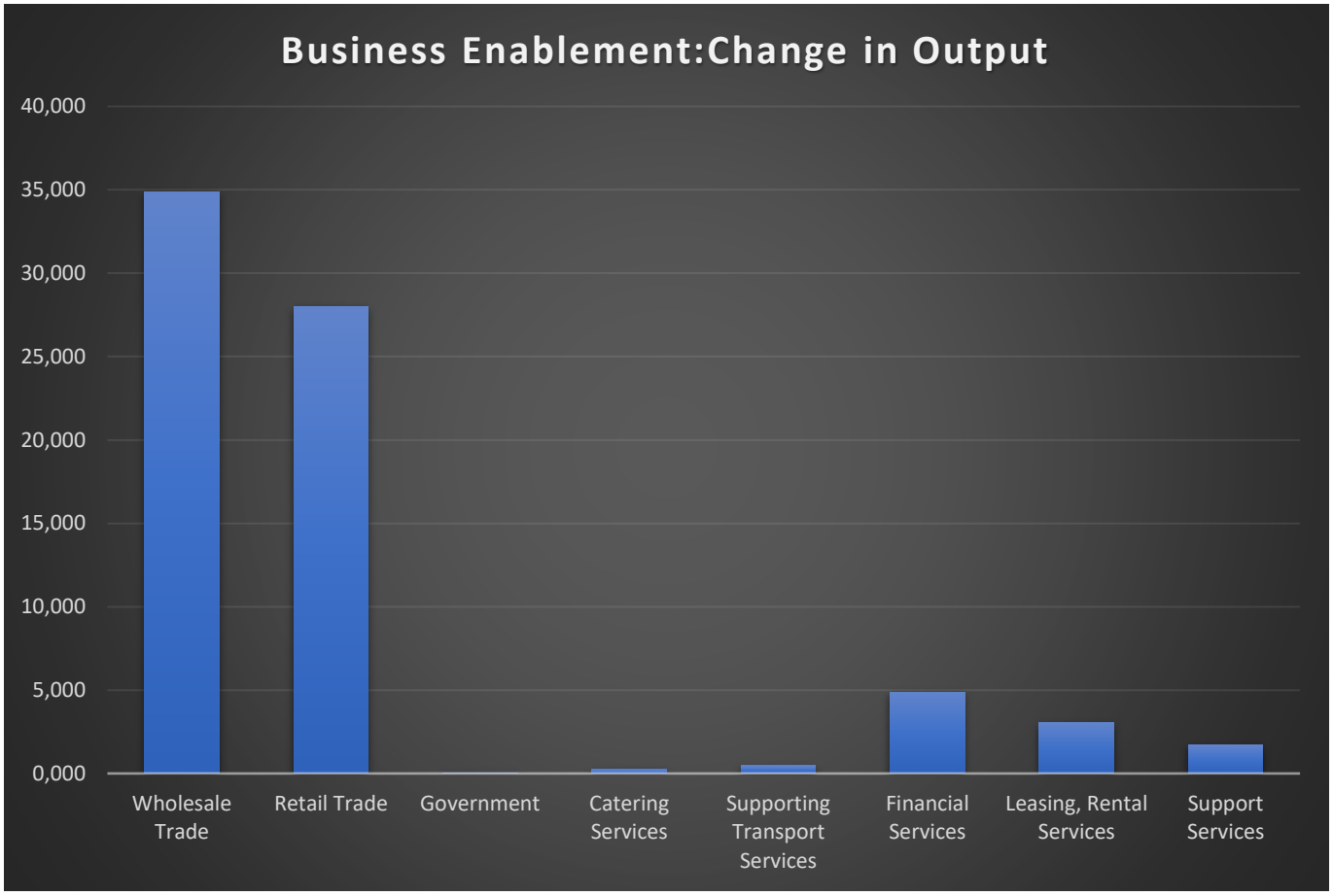


Figure 5: Changes in output in sectors linked to Tourism Value Chain (Business Enablement)

Following the introduction of the Business Enablement policy, the wholesale trade and commission trade industry experiences the largest increase among those sectors closely linked with the tourism value chain with output increasing by R34.898 million. The retail trade industry saw an increase in output amounting to R27.997 million. The introduction of the Business Enablement policy led to an increase in the demand for financial services amounting to R4.883 million. Leasing and rental services experienced an increase in demand amounting to R3.044 million. Support services experienced an increase in demand of R1.717 million following the introduction of the Business Enablement policy. The public sector experienced a marginal increase in output amounting to R0.049 million. Catering services experienced a minute increase in demand amounting to R 0.230 million.

While the Corporate Support policy primarily benefitted financial services, leasing and rental services, as well as support services, Business enablement primarily benefits trade, with wholesale trade and retail trade enjoying the largest increases.

Following the implementation of Business Enablement and the investment of R84.9 million, there is an overall increase in the gross output within the sector as well as throughout the economy. The figure below depicts both the increases in output produced by industries and the increase in commodities.

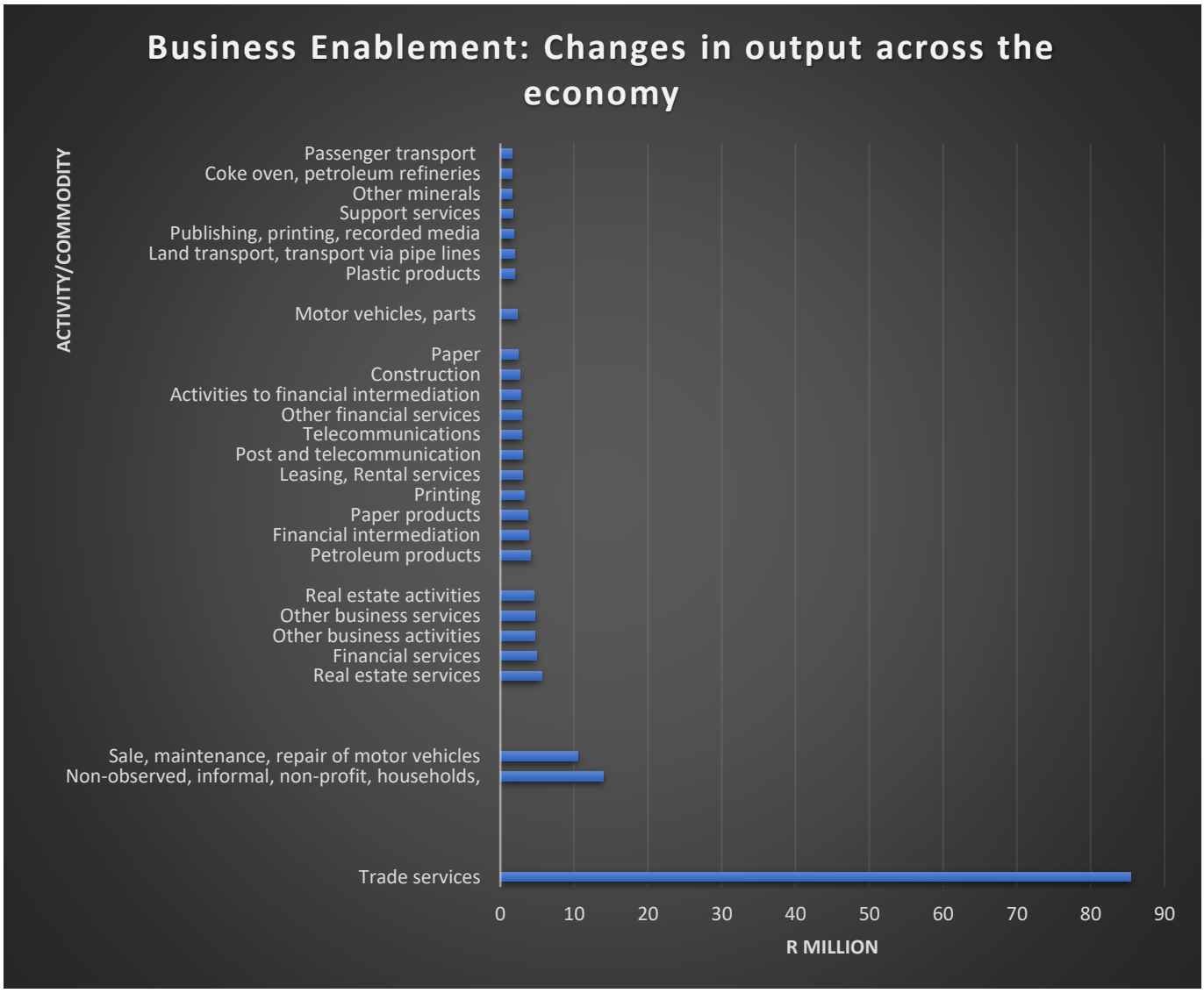


Figure 6:Changes in Output throughout the economy (Business Enablement)

There was an increase in the demand for trade services amounting to R85.377 million following the introduction of the Business Enablement policy. This was then followed by an increase in output produced by non-observed, informal, non-profit, households amounting to R13.984 million. The industry focused on the sale, maintenance, repair of motor vehicles saw an increase in output of R10.548 million.

Real estate services saw an increase in demand of R5.576 million. Other business activities enjoyed an increase in output amounting to R4.720 million. Other business services experienced an increase in demand amounting to R4.705 million. The real estate industry saw an increase in output amounting to R4.577 million. To generate output in the trade industry following the allocation of the R84.9 million associated with the Business Enablement policy, R4.125 million worth of petroleum products were demanded.

The introduction of the Business Enablement policy led to an increase in the demand for financial intermediation amounting to R3.831 million. The demand for paper products experienced an increase amounting to R3.745 million. The demand for printing saw an increase of R3.220 million. Leasing and rental services experienced an increase in demand amounting to R 3,044 million. Output produced by the post and telecommunication industry increased by R3.013 million. The demand for telecommunications saw an increase in demand of R2.915 million. There was an increase in the demand for other financial services amounting to R2.855 million. The activities to financial intermediation industry saw its output increase by R2.751 million. The construction industry saw in increase in output amounting to R2.687 million. The value of output produced by the paper industry increased by R2.383 million. There was an increase in the demand for plastic products amounting to R1.966 million. The remaining increases in demand as well as output for each industry and commodity continue falling below R1.9 million as depicted in Appendix 2.

The Business Enablement policy was able to successfully generate demand of commodity inputs across the economy and increase output. However, this policy had a lower output effect as compared to Corporate Support. Despite having a lower output effect and multiplier compared to Corporate Support, the Business Enablement policy saw a larger increase in output from the informal sector with output increasing by R13.984 million for Business Enablement whereas for Corporate Support, the informal sector's output only increased by R4,599 million. From this, it can be argued that the Business Enablement policy is more beneficial for the informal economy and non-profits as compared to the Corporate Support policy.

4.2.3. Shock 3: Tourist Experience

The third shock, dedicated towards improving the Tourist Experience saw an allocation of R65 million. The allocation of 65 million resulted in an overall increase in the gross output within the sector and its ripple effects were felt throughout the economy.

The figure below (figure 7) depicts the impact of that the R65 million allocation towards the Tourist Experience policy had on the various sectors in the economy.

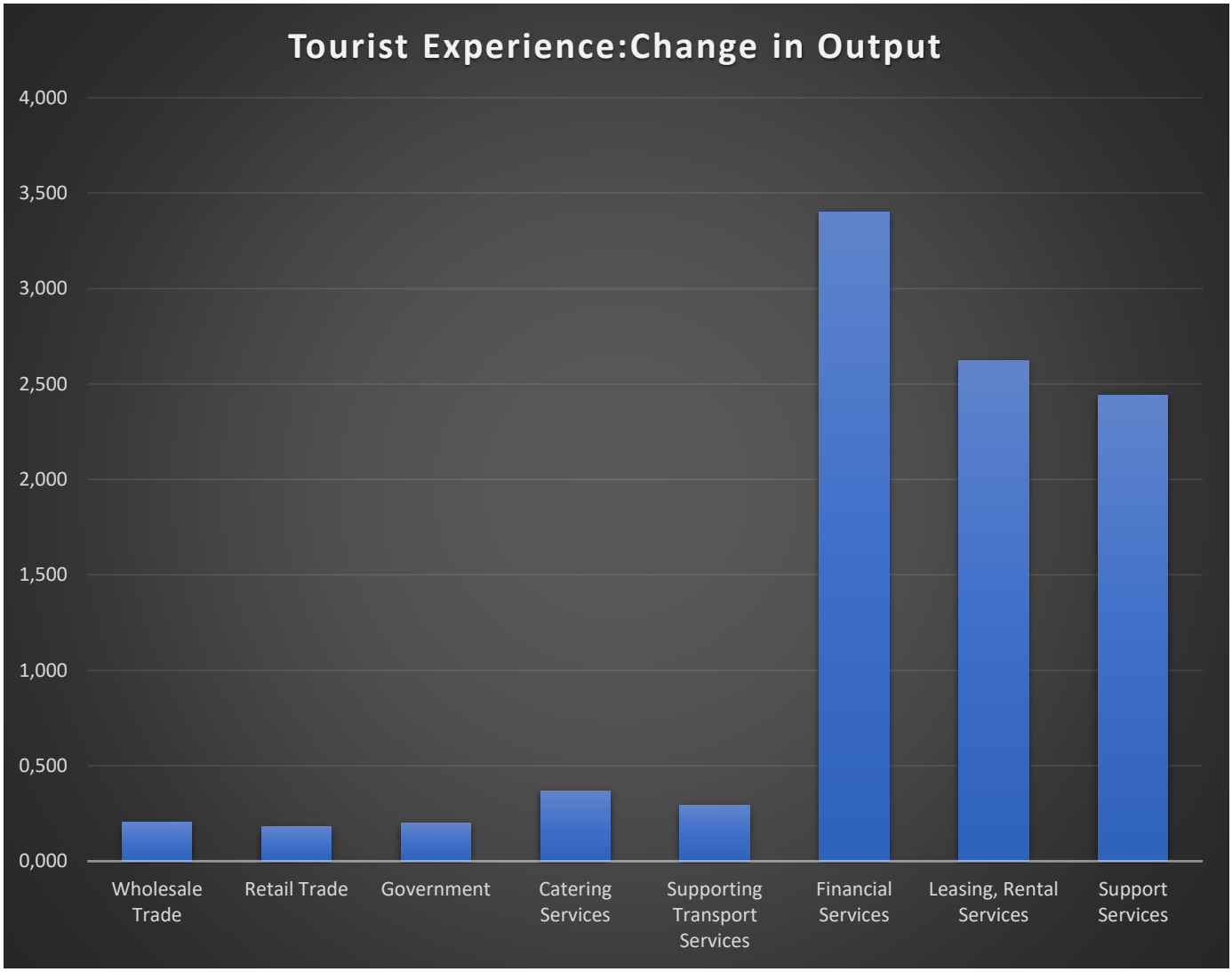


Figure 7: Changes in output in sectors linked to Tourism Value Chain (Tourist Experience)

Much like the Corporate Support policy, financial services, leasing and rental services, and lastly support services enjoy the largest increases in demand. However, unlike the Corporate Support policy, financial services experience an increase in demand of R 3.402 million. Leasing and rental services had the second largest increase with demand rising by R2.622396 million. Support services experienced an increase in demand of R 2.44 million. Both catering

services and supporting transport services experienced an increase in demand less than R1 million. Wholesale trade, retail trade and the public sectors also see increases in output amounting to less than R1 million each. The Tourist Experience policy saw a lower increase in output and demand as compared to Corporate Support.

Similar to Corporate Support and Business Enablement, the impact of the Tourist Experience spans across the whole economy and other sectors also experienced an increase in output produced.

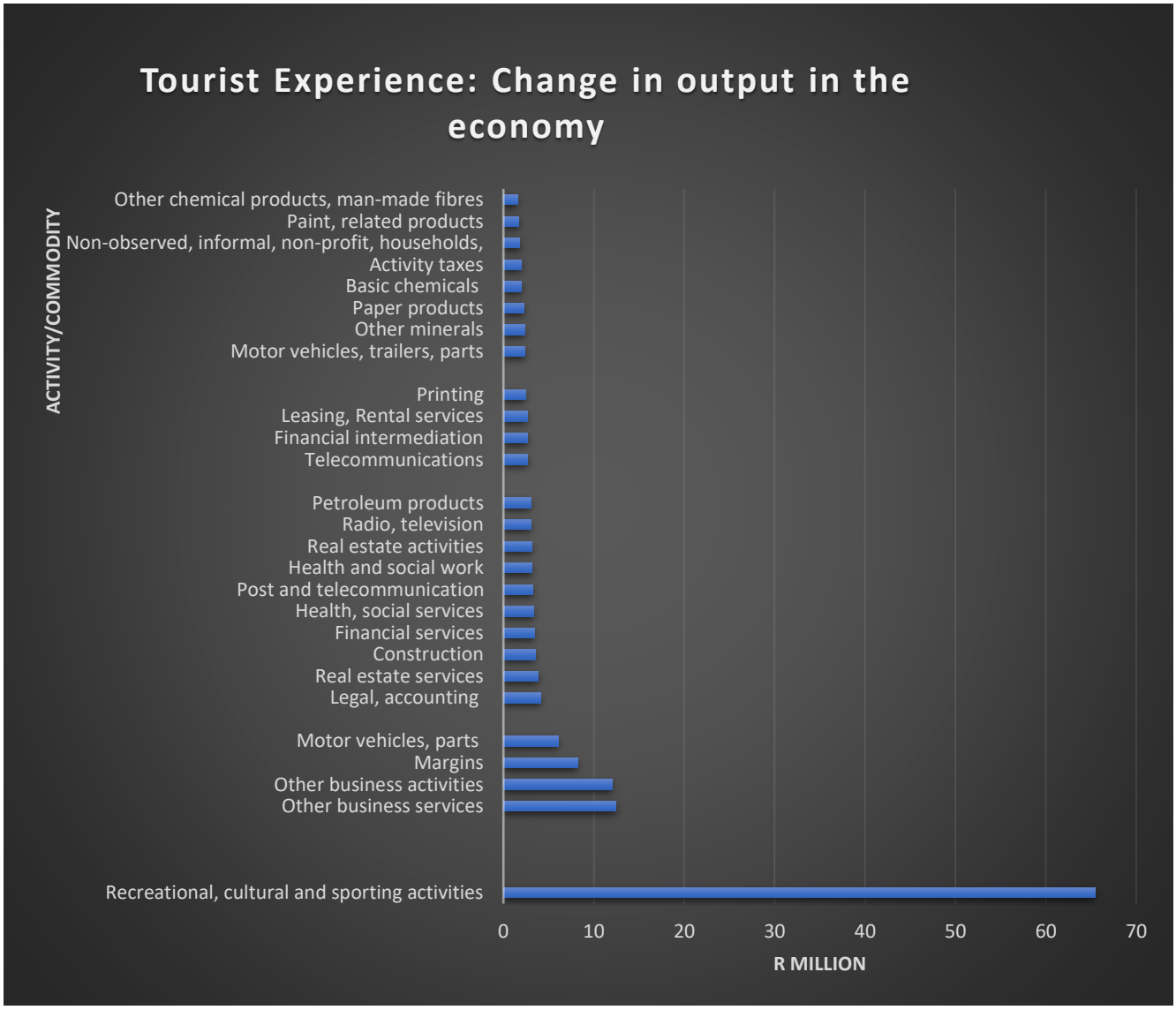


Figure 8:Changes in Output throughout the economy (Business Enablement

The diagram above suggests that the Tourist Experience programme had an overall positive impact on the quantity of output produced across different industries as well as the number of commodities in the economy.

The recreational, cultural, and sporting activities sector saw a rise in output amounting to R65.425 million. This was the largest increase resulting from the introduction of the Tourist Experience policy. The R65 million represents the direct impact of the policy and the R0.425 represents the indirect impact that the policy has had on recreational, cultural and sporting activities. Other business services experienced an increase in demand amounting to R12.469 million. Other business activities enjoyed an increase in output amounting to R12.019 million.

Following the introduction of the Tourist Experience policy, the demand for motor vehicles and parts increased by R6.077 million. The demand for legal and accounting services increased by R4.119 million. Real estate services saw an increase in demand of R3.880 million. The construction industry saw in increase in output amounting to R3.497 million. . Health and social services experienced an increase in demand of R3.343 million. Output produced by the post and telecommunication industry increased by R3.292 million. The health and social work sector saw an increase in output produced amounting to R3.201 million. The real estate industry experienced an increase in output amounting to R3.186 million. The demand for radio and television increased by R3.061 million. To generate output in the trade industry following the allocation of the R65 million associated with the Tourist Experience policy, R3.050 million worth of petroleum products were demanded.

The demand for telecommunications experienced an increase in demand of R2.713 million following the introduction of the Tourist Experience policy. The financial intermediation industry increased its output by R2.669 million. The demand for printing saw an increase of R2.466 million. Support services experienced an increase in demand of R2.442 million following the introduction of the Tourist Experience policy. The motor vehicles, trailers and parts industry experienced an increase in output amounting to R2.390 million. There was an increase in the demand for other minerals amounting to R2.370 million resulting from the Tourist Experience policy. The demand for paper products experienced an increase amounting to R2.294 million. Basic chemicals experienced an increase in demand of R2.005 million. Additionally, there was an increase in the output produced by non-observed, informal, non-profit, households amounting to R1.832 million. The demand for paint and paint related products rose by R1.716 million. Industries focused on producing other chemical products and man-made fibres experienced an increase in the value of output produced of R1.556 million. Although other industries in the economy also experienced an

increase in output and there was an increase in demand, their changes in output amount to less than R1.5 million each.

Similar to the Corporate Support Policy and the Business Enablement policy, the output produced by an industry is not equal to the number of commodities. An example of this is with other business activities where the output produced increases by R12.019 million whereas, the demand for other business services increases by R12.468 million. This implies that to meet that demand, R0.449 million worth needs to be imported. The difference between the two is not always as modest for example, activities to financial intermediation experience an increase in output amounting to R1.294 million whereas the demand for financial intermediation services amounting to R2.669 million meaning that R1.375 million needs to be imported to meet demand in this sector alone.

Non-observed, informal, non-profit, households experience the lowest increase in output under Tourist Experience policy when compared with the other two policies with an increase amounting to R1.832 million as compared to the healthier increase experienced under the Corporate Support policy of R4.599 million and the larger increase associated with the Business Enablement policy amounting to R13.984 million. Non-profit organizations and the informal sector experience the greatest increase in output under the Business Enablement policy. It has been established that Small, Medium and Micro Enterprises (SMME) play a significant role in the tourism sector and the economy as a whole and the same can be said about the informal sector.

Much like the Business Enablement policy, the Tourist Experience programme produces lower increases in output across the various sectors as compared to those of the Corporate Support policy. Despite this, the various industries do respond positively to the policies and there is still an increase in output experienced. This could be attributed to the amount of money allocated to each of the three policies and if for example, more money had been allocated to the Business Enablement policy, a greater increase in output could have been seen in response. Moreover, this is supported by the fact that despite Tourist Experience having the lowest output effect, it has the highest output multiplier.

Despite each of the three policies yielding an increase in the level output produced as well as an increase in the number of commodities in the economy, an increase in the leakages was

also observed. The diagram below (figure 7) depicts the increase in leakages for each of the three policies.

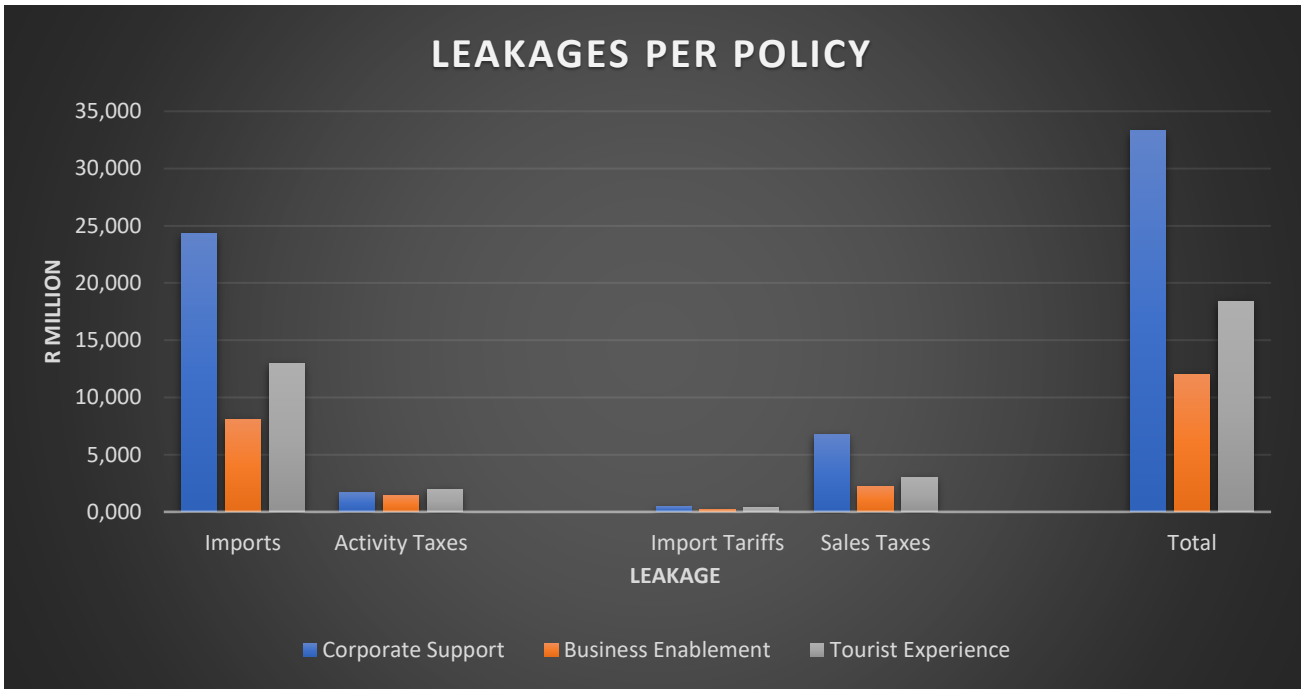


Figure 9:Leakages per policy

As illustrated in figure 8, the greatest leakage arising from each of the three policies is imports. The Corporate Support policy yields the greatest leakage in the form of imports amounting to R24,332 million. This is then surprisingly followed by the Tourist Experience's imports which amount to R13.004 million. The third highest leakage experienced is the Business Enablement's imports which amounts to R8.095 million. Besides imports, the second highest leakage comes in the form of sales taxes with the Corporate Support policy having the highest sales tax amounting to R6.777 million. This is then followed by the Tourist Experience's sales tax which amounts to R3.010 million. The smallest sales tax belongs to the Business Enablement policy with a sales tax of R2.250 million. Under activity taxes, the Tourist Experience policy yielded the highest value with the amount being R1.974 million. The activity taxes arising from the Corporate Support policy amounted to R1.684 million. The impot tariffs for each of the three policies were each below R0.6 million with the highest tariff belonging to the Corporate Support policy amounting to R0.514 million and the lowest belonging to the Business Enablement policy amounting to R0.235 million.

When looking at the leakages as a whole, the Corporate Support policy had the highest leakages totalling R33.07 million. This was followed by the Tourist Experience policy with an aggregate leakage of R18.412 million which is R14.658 million less than that of the

Corporate Support policy. The Business Enablement policy had the lowest total leakage with R12.029 million which is R6.383 million less than that of the Tourist Experience policy and R21.278 million less than that of the Corporate Support policy.

The introduction of Corporate Support, Business Enablement and Tourist Experience each had a positive impact on the payments to the factors with payments to capital and labour having both experienced increases. The diagram below (Figure 10) depicts the distribution of the payments to capital and labour for each of the three policies.

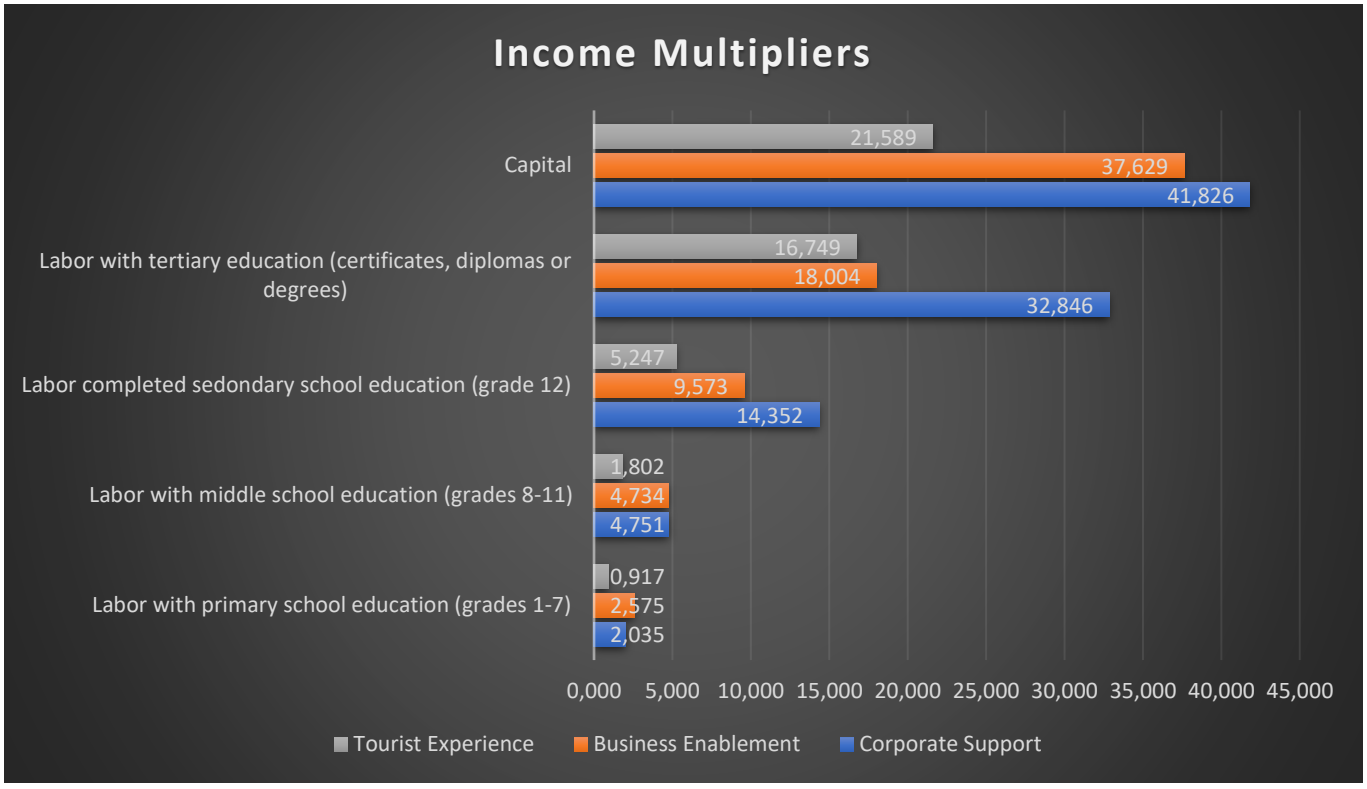


Figure 10: Payments to factors of production

Figure 10 reflects the payments to the factors of production namely, the payments to capital and labour resulting from each of the three policy shocks. Labour is separated depending on the level of education achieved. Payments to labour are in the form of wages. Payments to capital are in the form interest. For payments to capital, the Business Enablement policy yielded the highest payment to capital. This was then followed by the Corporate Support Initiative and lastly by the Tourist Experience policy. The payments to labour for their value

addition differ depending on the level of education for all three policies with those workers that have tertiary education earning significantly more as compared to those with primary education solely. Each of the three policies seem to benefit those with tertiary education more as compared to those with primary, middle school and secondary. The Corporate Support initiative yields the highest factor payments for labour with tertiary education and labour with secondary education. However, the Business Enablement initiative yields the highest factor payments to labour among those with primary school education and middle school education. Although each of these policies have led to an increase in output in both the tourism sector and across the economy, the policies do not seem to completely protect those that are vulnerable to the pandemic. Those with primary school education and middle school education see significantly smaller increases in factor payments. Additionally, payments to capital exceed that of payments to labour with the exception of labour that has received tertiary education under the Corporate Support policy.

In the simulation, the introduction of each of these policies has resulted in an increase in the quantity of output produced by not only the tourism sector but other sectors through backward linkages. However, the increases in output compared to the original output value are modest. Below is a diagram (Figure 11) depicting the percentage change in output for each of the policy shocks.

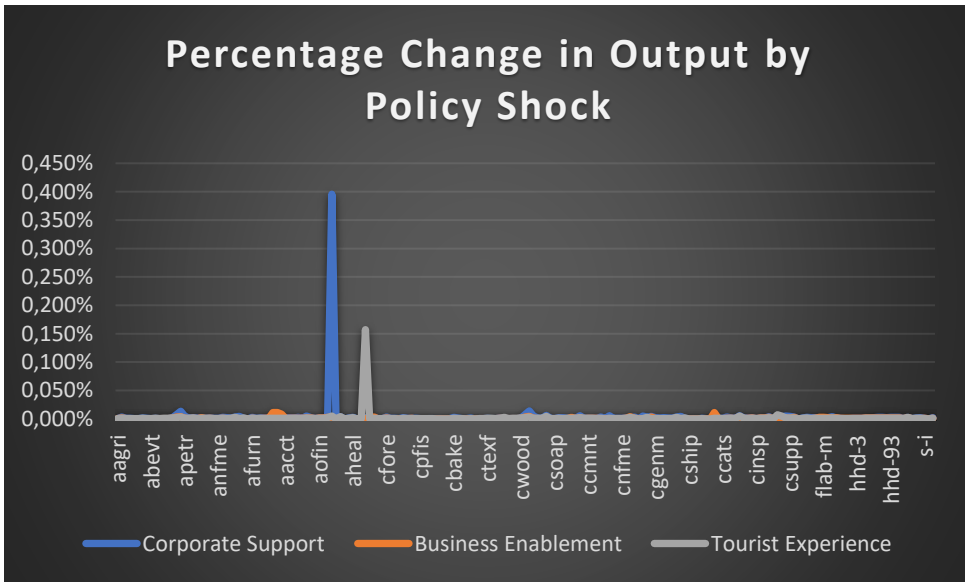


Figure 11: Percentage changes in Output

The above diagram (Figure 11) depicts the percentage changes in output across the sectors. Despite a positive increase in output depicted by the positive percentage changes as well as the data presented in *Figures* 4, 6 and 8 the percentage increase in output is small, amounting to less than 1% of the original output in for each industry across all three policies. Although output produced has seen an increase as compared to before the introduction of policy shocks, the change in output produced is miniscule. The Corporate Support policy yielded the greatest percentage increase in output. The Business Enablement policy revealed the second largest percentage change in output. The Tourist Experience had the lowest changes in output. As shown by the tables in Appendix 2, the changes in output experienced in each industry were significantly below 1%. However, this could be attributed to the amounts allocated to each policy with the highest allocation seen in Corporate Support policy of R126 million being less than 5 % of the original output amount.

One of the key assumptions made when crafting the model used to produce these results was that prices are fixed. Assuming this is also true for factors of production, it can be assumed that wages are fixed. From these assumptions, one can infer that for the factor payments to labour to change, there would need to be a change in level of employment. Given how low the change in output was, following the implementation of each policy, the percentage change in employment will also be low. The table in Appendix 3 shows that following each of the policy shocks, although there is an increase in the level of employment though the increase in employment amounts to less than 1% for each industry.

Despite the percentage changes in output and employment being small and amounting to less than 1% in each sector, the introduction of each of the three policies has a positive impact. Looking at the changes through a macro level lens, the percentage changes in output and employment are minute compared to the original output produced by each sector. However, looking at these increases in output and employment through a micro lens on the ground level, the increases are beneficial especially to those individuals and businesses most vulnerable. As mentioned earlier, many businesses were at risk especially small to medium businesses due to the pandemic and many markets experienced a fall in demand.

The pandemic brought with it a plethora of adverse effects on business, jobs and the economy with many businesses facing closure and people at risk of losing their jobs. The introduction of each policy resulted in a positive increase in the level of output produced as well as an

increase in employment in not only the tourism industry but the economy as a whole. Referring back to table 4, the total impact of the Corporate Support policy is reflected by an increase in output in the tourist industry amounting to R46,069 million. According to table 4, the total impact of the Business Enablement policy is reflected by the by an overall increase in output amounting to R83,635 million and the total impact of the Tourist Experience policy is reflected in table 4 by an increase amounting to R83,634 million. Given that the tourism industry is largely made up of small to medium enterprises, this means that each of the three policies led to these businesses increasing their operations amid the pandemic. Each of the three policies is sparking demand and production amongst these firms. The overall output effects and output multipliers shown in table 6 show an increase in output across the economy in response to an increase in demand. Although the percentage changes in output mentioned earlier are small, there is an evident increase in output throughout the economy, implying that the policies were somewhat successful in reigniting demand. Referring to Appendix 3, although the changes in employment amount to less than 1% by industry, there is still an increase in the level of employment.

On close analysis and appraisal, the results reveal that all three policies have a positive impact on the tourism sector and the economy as a whole. However, the percentage change in output produced by each policy is modest. Despite the percentage change being modest, each of the policies still yield benefits on the ground level, especially for small to medium enterprises in both the tourism industry and the economy as a whole, both in terms of output and employment.

Chapter 5: Policy Recommendations

Each of the three policies namely, Corporate Support, Business Enablement and the Tourist Experience are successful in improving the state of the tourism industry amid the global pandemic. Each policy successfully the generates positive spill over effects throughout the economy with increases in output produced, employment and consumption throughout the economy.

The government of South Africa still firmly believes that the tourism industry is one with the potential to be a large impetus of growth. However, the results presented reveal that alone, as it is, tourism cannot act as a key driver of growth with the policies investigated in this paper generating modest changes to the economy with regards to output and employment as compared to the original output and employment levels. The tourism sector is yet to have its full potential unlocked as a key driver of growth and because of this, the policies introduced here didn't have as large of an impact on the output. Despite this, the tourism industry did see an improvement in output and employment implying some level of success was achieved with the introduction of each of these policies.

Earlier, issues were raised regarding the distribution of factor payments following the introduction of each of the three policies with labour that only has a primary school education receiving the lowest increase in factor payments. A potential means to mitigate this and ensure that the labour that only has primary school education are protected amid the pandemic would be another policy that compliments that of the other three while offering support to this vulnerable group. This could be in the form of a grant, or a training initiative aimed at upskilling the labour as a means of improving the value addition process and the factor payments received. This has the potential to generate a positive ripple effect throughout the economy as value addition would potentially see an increase.

For tourism to generate a larger contribution to the Gross Domestic Product and economic growth, its potential as an industry needs to be realised. For the tourism industry to have this potential realised, the appropriate foundations need to be put in place within the sector. To fully unlock the value held within the tourism sector, effective strategies need to be implemented. The development of such strategies requires a high degree of effectiveness from the government (Antonakakis, N et al. 2019). The government has a significant role in

unlocking the tourism industry's potential to become an impetus of economic growth. One key role that the government needs to perform is to limit tourism income leakages as these do affect the effectiveness of the industry in driving economic growth (Antonakakis, N et al. 2019). Furthermore, the state needs to ensure that the tourism value chain is improved by fostering collaborations between itself, the domestic private sector as well as international tourism firms to ensure that key tourism resources and the tourism processes are sourced locally within the country (Antonakakis, N et al. 2019). The significance of the impact that tourism can play on the economies of many developing countries justifies the necessity of public intervention aimed at the promotion of tourism demand (Samimi, A et al. 2011).

For South Africa's tourism industry to see a significant increase its output and contribution to GDP, it is vital that it improve its competitiveness in the region as well as on the global stage. Policies need to be put in place that allow firms in the tourism sector to improve their competitiveness.

The state thus far has played an active role in seeing the tourism industry recover amid the pandemic and has implemented other policies in addition to the ones investigated in this study. Currently, in addition to the policies that were analysed in this study, the government implemented a R1billion marketing programme aimed at improving the country's image following the bad publicity it received upon the discovery of a new COVID variant in South Africa. The marketing programme needs to run even after the rehabilitation of South Africa's image as a tourist destination as a means of increasing the awareness of the country's tourism industry as well as improving the level of competitiveness. The state has also introduced a Business Events programme seeks to grow South Africa's business events industry with an investment of R126 million. Despite the active role that the state has played thus far in resuscitating South Africa's tourism industry, the state needs to play an even more active role in ensuring that the business environment is conducive enough for the tourism industry to thrive.

There have been several studies that have suggested that tourism development alone does not lead to significant economic growth and development but instead, tourism development in conjunction with other complimentary policies is what leads to significant economic growth

(Du, D; Lew, A and Ng, P. 2016). An example of this is how the combination of international tourism development and trade liberization policies generated a significantly positive economic impact for Indonesia (Du, D; Lew, A and Ng, P. 2016). In future when developing tourism development policies, the state needs to ensure that there exists a complementary policy which will enhance the tourism development as well as foster economic growth.

Lastly, improving the infrastructure could aid in unlocking the tourism industry's potential as a key impetus of economic growth and development (Faber, B & Gaubert, C. 2019).

An important disclaimer needs to be considered when selecting the appropriate policy when working towards tourism development and economic growth. It is important to note that the policy recommendations made in this study might yield different results if applied in a different area facing similar challenges to those faced in this study. This is due to differences in the characteristics that make up the different countries. Additionally, researchers have reached mixed and at times conflicting results despite looking at the same relationship between tourism development and economic growth while using similar methodological techniques and similar datasets.

Chapter 6: Conclusion

The introduction of the COVID-19 global pandemic had severe adverse effects on not only the global healthcare sector but also on the global economy at large. In this increasingly globalised world, the most adversely affected industry across the world was the tourism industry. With many economies still in recovery, the tourism sector may hold the answer to recovery. There has been literature that has highlighted the importance of tourism development towards achieving economic growth. There has been increasing discourse around the importance of the tourism sector and the different roles it plays socially and economically. This paper sought to investigate how a tourism sector recovery plan would impact the recovering tourism industry and additionally, how this plan would affect the economy at large.

Using South Africa as a case study, the results revealed that the Tourism Sector Recovery Plan did in fact create positive economic benefits both within the tourism sector and the economy as a whole, with output from each sector increasing as well as employment. The implementation of each of the three policies resulted in a positive direct impact, indirect impact, and induced effects on the tourism industry.

The implementation of the Corporate Support policy yielded the greatest increase in output produced domestically, with an output effect of R234.618 million and an output multiplier of 1.862 following an investment of R126 million. The Business Enablement policy yielded the second largest increase in output produced with an output effect amounting to R133.003 million and an output multiplier of 1,567 following an investment of R84,9 million. The third largest increase in output came from the Tourist Experience policy with an output effect amounting to R122.936 million and an output multiplier of 1.891 following an investment of R65 million. Despite these impressive looking figures, the percentage change in output produced following the introduction of each of these three policies was modest.

Based on the findings in this paper, it can be argued that the Tourism Sector Recovery Plan was successful in limiting the adverse effects that the pandemic has had on South Africa's tourism industry, with the level of output produced seeing a positive increase following the introduction of the Corporate Support policy, the Business Enablement policy and the Tourist Experience policy. Additionally, all three policies managed to increase the demand of commodities throughout the economy. Despite the modest changes in output compared to

their original amounts, many small to medium enterprises within the tourism sector and the economy at large greatly benefitted from the introduction of each policy. Additionally, the introduction of each policy saw an increase in the level of employment though the percentage change in employment was modest. Despite how modest the percentage change in employment was, it still meant that those who were most vulnerable to the effects of the pandemic were able to find work.

The low percentage changes in output and employment following the introduction of each of the three policies suggest that the tourism sector's potential to become a key driver of economic growth and development is yet to be unlocked. To unlock the industry's full potential and realise this dream, the government will need to play a more active role in the development of the tourism industry. Additionally, complimentary policies need to be implemented alongside tourism development policies to see an adequate improvement in the tourism industry's contribution to economic growth. The government also needs to improve the environment in which the tourism industry operates to ensure that the industry maintains or improves its competitiveness globally while also realising its potential to be a key contributor towards growth.

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Appendix 1: 2015 SAM Glossary

Table 7: 2015 Macro SAM Glossary

Micro Acc	Description
aagri	Agriculture
afore	Forestry
afish	Fishing
acoal	Mining of coal and lignite
agold	Mining of gold and uranium ore
amore	Mining of metal ores
aomin	Other mining and quarrying
afood	Food
abevt	Beverages and tobacco
aweav	Spinning, weaving, and finishing of textiles
aknit	Knitted, crouched fabrics, wearing apparel, fur articles
aleat	Tanning and dressing of leather
afoot	Footwear
awood	Sawmilling, planing of wood, cork, straw
apapr	Paper
aprnt	Publishing, printing, recorded media
apetr	Coke oven, petroleum refineries
abchm	Nuclear fuel, basic chemicals
aochm	Other chemical products, man-made fibres
arubb	Rubber
aplas	Plastic
aglss	Glass
anmmi	Non-metallic minerals
abisc	Basic iron and steel, casting of metals
anfme	Basic precious and non-ferrous metals
afabm	Fabricated metal products
amach	Machinery and equipment
aemch	Electrical machinery and apparatus
ardtv	Radio, television, communication equipment and apparatus
amopt	Medical, precision, optical instruments, watches, and clocks

amtvp	Motor vehicles, trailers, parts
aotrp	Other transport equipment
afurn	Furniture
aomnf	Manufacturing n.e.c, recycling
aelcg	Electricity, gas, steam, and hot water supply
awatd	Collection, purification, and distribution of water
acnst	Construction
awtrd	Wholesale trade, commission trade
artrd	Retail trade
amtvs	Sale, maintenance, repair of motor vehicles
aacct	Hotels and restaurants
altrp	Land transport, transport via pipe lines
awtrp	Water transport
aatrp	Air transport
atrps	Auxiliary transport
apost	Post and telecommunication
afins	Financial intermediation
ainsp	Insurance and pension funding
aofin	Activities to financial intermediation
areal	Real estate activities
arent	Renting of machinery and equipment
acomp	Computer and related activities
arsea	Research and experimental development
aobus	Other business activities
apuba	Government
aeduc	Education
aheal	Health and social work
awast	Sewerage and refuse disposal
amorg	Activities of membership organisations
arecr	Recreational, cultural, and sporting activities
aoact	Other activities
anobs	Non-observed, informal, non-profit, households,
cagri	Agriculture
clani	Live animal
cfore	Forestry
cfish	Fishing
ccoal	Coal and lignite
cmore	Metal ores
comin	Other minerals
celcg	Electricity and gas
cwatr	Natural water
cmeat	Meat
cpfis	Fish
cvege	Vegetables
cfrui	Fruit and nuts

cfats	Oils and fats
cdair	Dairy products
cgrai	Grain mill products
cstar	Starches products
cafee	Animal feeding
cbake	Bakery products
csuga	Sugar
cconf	Confectionary products
cpast	Pasta products
cofoo	Food n.e.c.
calcb	Alcohol, beverages
csftd	Soft drinks
ctoba	Tobacco products
ctexf	Textile fabrics
ctexm	Made-up textile, articles
ccarp	Carpets
cotex	Textile n.e.c.
cknit	Knitting fabrics
cwear	Wearing apparel
cleat	Leather products
cfoot	Footwear
cwood	Wood products
cpapp	Paper products
cprnt	Printing
cpetr	Petroleum products
cbchm	Basic chemicals
cfert	Fertilizers, pesticides
cpain	Paint, related products
cphar	Pharmaceutical products
csoap	Soap, cleaning, perfume
coche	Chemical products, n.e.c.
ctyre	Rubber tyres
corub	Other rubber products
cplas	Plastic products
cglas	Glass products
ccera	Non-structural ceramic
cclay	Structure non-refractory clay
ccmnt	Plaster, cement
cconc	Articles of concrete
conmp	Non-metallic products n.e.c.
cfurn	Furniture
cjewl	Jewellery
comnf	Manufactured products n.e.c.
cwast	Wastes, scraps
cirst	Iron, steel products

cnfme	Non-ferrous metals
cstrm	Structural metal products
ctank	Tanks, reservoirs
cofbm	Other fabricated metal
cengt	Engines, turbines
cpump	Pumps, compressors
cgear	Bearings, gears
clift	Lifting equipment
cgenm	General machinery
cspcm	Special machinery
cdoma	Domestic appliances
coffm	Office machinery
celcm	Electrical machinery
crdtv	Radio, television
cmeda	Medical appliances
cmtvp	Motor vehicles, parts
cship	Ships and boats
crail	Railway and trams
cairc	Aircrafts
coteq	Other transport equipment
ccnst	Construction
ccsrv	Construction services
ctrad	Trade services
cacco	Accommodation
ccats	Catering services
cptrp	Passenger transport
cftrp	Freight transport
ctrps	Supporting transport services
cpost	Postal, courier services
celcd	Electricity distribution
cwatd	Water distribution
cfins	Financial services
cinsp	Insurance, pension
cofin	Other financial services
creal	Real estate services
crent	Leasing, Rental services
crsea	Research, development
clacc	Legal, accounting
cobus	Other business services
ctelc	Telecommunications
csupp	Support services
cmnfs	Manufactured services n.e.c.
cpuba	Public administration
ceduc	Education services
cheal	Health, social services

cosrv	Other services n.e.c.
trc	Margins
flab-p	Labor with primary school education (grades 1-7)
flab-m	Labor with middle school education (grades 8-11)
flab-s	Labor completed sedondary school education (grade 12)
flab-t	Labor with tertiary education (certificates, diplomas, or degrees)
fcap	Capital
ent	Enterprises
hhd-0	Households - Decile 1
hhd-1	Households - Decile 2
hhd-2	Households - Decile 3
hhd-3	Households - Decile 4
hhd-4	Households - Decile 5
hhd-5	Households - Decile 6
hhd-6	Households - Decile 7
hhd-7	Households - Decile 8
hhd-8	Households - Decile 9
hhd-91	Households - Percentile 90-92
hhd-92	Households - Percentile 92-94
hhd-93	Households - Percentile 94-96
hhd-94	Households - Percentile 96-98
hhd-95	Households - Percentile 98-100
gov	Government
atax	Activity taxes
dtax	Direct taxes
mtax	Import tariffs
stax	Sales taxes
s-i	Savings & investment
dstk	Change in stocks
row	Rest of world

Appendix 2: Changes in Output by Policy Shock

Table 8: Changes in Output Following Corporate Support

Corporate Support	*Change in Final Demand (Rmillion)*	*Change in Output (Rmillion)*	*Original Output (Rmillion)*	%Change in Output
Agriculture	0	0,855	192501,305	0,000
Forestry	0	0,568	19126,046	0,003
Fishing	0	0,049	7162,952	0,001
Mining of coal and lignite	0	1,186	112598,503	0,001
Mining of gold and uranium ore	0	0,197	74075,192	0,000
Mining of metal ores	0	0,857	256827,383	0,000
Other mining and quarrying	0	1,440	90055,887	0,002
Food	0	2,907	301059,878	0,001
Beverages and tobacco	0	0,272	99920,014	0,000
Spinning, weaving and finishing of textiles	0	0,283	31262,752	0,001
Knitted, crouched fabrics, wearing apparel, fur articles	0	0,097	25396,649	0,000
Tanning and dressing of leather	0	0,026	7307,292	0,000
Footwear	0	0,018	9538,647	0,000
Sawmilling, planing of wood, cork, straw	0	0,637	49982,646	0,001
Paper	0	5,614	82209,686	0,007
Publishing, printing, recorded media	0	6,011	47947,110	0,013
Coke oven, petroleum refineries	0	6,316	159956,154	0,004
Nuclear fuel, basic chemicals	0	1,881	115414,232	0,002
Other chemical products, man-made fibres	0	2,538	126864,198	0,002
Rubber	0	0,298	20794,812	0,001
Plastic	0	0,368	34577,588	0,001
Glass	0	0,084	9774,333	0,001
Non-metallic minerals	0	0,577	46772,853	0,001
Basic iron and steel, casting of metals	0	1,241	165302,044	0,001
Basic precious and non-ferrous metals	0	0,400	48787,524	0,001
Fabricated metal products	0	2,202	94195,114	0,002
Machinery and equipment	0	1,958	96409,127	0,002
Electrical machinery and apparatus	0	0,657	50179,042	0,001
Radio, television, communication equipment and apparatus	0	0,385	14055,809	0,003

Medical, precision, optical instruments, watches and clocks	0	0,394	9581,494	0,004
Motor vehicles, trailers, parts	0	1,228	187515,943	0,001
Other transport equipment	0	0,020	18603,958	0,000
Furniture	0	0,582	20697,563	0,003
Manufacturing n.e.c, recycling	0	0,446	51473,188	0,001
Electricity, gas, steam and hot water supply	0	2,704	177694,919	0,002
Collection, purification and distribution of water	0	0,706	63127,992	0,001
Construction	0	4,113	409535,171	0,001
Wholesale trade, commission trade	0	1,236	339975,767	0,000
Retail trade	0	1,043	272731,150	0,000
Sale, maintenance, repair of motor vehicles	0	1,795	135931,500	0,001
Hotels and restaurants	0	0,918	80299,547	0,001
Land transport, transport via pipe lines	0	4,774	376743,969	0,001
Water transport	0	0,019	4328,999	0,000
Air transport	0	1,016	43078,400	0,002
Auxiliary transport	0	0,723	80133,908	0,001
Post and telecommunication	0	8,825	196920,652	0,004
Financial intermediation	0	4,673	251542,743	0,002
Insurance and pension funding	0	1,011	170535,427	0,001
Activities to financial intermediation	0	2,407	193787,000	0,001
Real estate activities	0	5,640	370520,854	0,002
Renting of machinery and equipment	0	0,760	24803,500	0,003
Computer and related activities	126	126,971	32130,004	0,395
Research and experimental development	0	0,002	15521,998	0,000
Other business activities	0	10,670	314577,919	0,003
Government	0	0,310	922105,484	0,000
Education	0	1,278	82890,796	0,002
Health and social work	0	4,779	173324,308	0,003
Sewerage and refuse disposal	0	0,002	2073,565	0,000
Activities of membership organisations	0	0,075	4450,313	0,002
Recreational, cultural and sporting activities	0	0,882	41670,930	0,002
Other activities	0	0,093	5213,592	0,002
Non-observed, informal, non-profit, households,	0	4,600	460425,681	0,001
Agriculture	0	0,705	180281,758	0,000
Live animal	0	0,382	60151,966	0,001
Forestry	0	0,673	22602,766	0,003
Fishing	0	0,066	9585,700	0,001
Coal and lignite	0	0,982	101385,672	0,001
Metal ores	0	0,493	305813,415	0,000
Other minerals	0	4,897	281738,182	0,002

Electricity and gas	0	0,453	45823,919	0,001
Natural water	0	0,122	12808,135	0,001
Meat	0	0,690	80793,267	0,001
Fish	0	0,105	28952,653	0,000
Vegetables	0	0,010	13427,712	0,000
Fruit and nuts	0	0,109	33075,557	0,000
Oils and fats	0	0,126	32010,606	0,000
Dairy products	0	0,161	54893,986	0,000
Grain mill products	0	0,115	49230,625	0,000
Starches products	0	0,026	19698,433	0,000
Animal feeding	0	0,079	26962,848	0,000
Bakery products	0	2,298	94295,122	0,002
Sugar	0	0,379	28901,373	0,001
Confectionary products	0	0,047	15114,035	0,000
Pasta products	0	0,004	2154,131	0,000
Food n.e.c.	0	0,790	48165,285	0,002
Alcohol, beverages	0	0,069	118973,042	0,000
Soft drinks	0	0,264	52601,015	0,001
Tobacco products	0	0,252	72628,185	0,000
Textile fabrics	0	0,304	32217,334	0,001
Made-up textile, articles	0	0,056	20888,734	0,000
Carpets	0	0,013	4811,722	0,000
Textile n.e.c.	0	0,142	11425,917	0,001
Knitting fabrics	0	0,021	6070,420	0,000
Wearing apparel	0	0,245	74845,980	0,000
Leather products	0	0,079	22157,748	0,000
Footwear	0	0,062	33570,329	0,000
Wood products	0	0,880	71705,780	0,001
Paper products	0	8,981	128260,101	0,007
Printing	0	11,017	82740,048	0,013
Petroleum products	0	16,913	391528,825	0,004
Basic chemicals	0	2,446	189458,137	0,001
Fertilizers, pesticides	0	0,448	41738,580	0,001
Paint, related products	0	2,461	41305,048	0,006
Pharmaceutical products	0	0,872	72926,367	0,001
Soap, cleaning, perfume	0	0,284	66794,935	0,000
Chemical products, n.e.c.	0	1,049	49003,546	0,002
Rubber tyres	0	0,529	30955,850	0,002
Other rubber products	0	0,100	13217,025	0,001
Plastic products	0	0,828	87447,265	0,001
Glass products	0	0,197	22664,797	0,001
Non-structural ceramic	0	0,400	8266,009	0,005

Structure non-refractory clay	0	0,213	23792,183	0,001
Plaster, cement	0	0,185	18417,012	0,001
Articles of concrete	0	0,283	30187,654	0,001
Non-metallic products n.e.c.	0	0,126	15993,323	0,001
Furniture	0	1,162	40435,996	0,003
Jewellery	0	0,026	20283,650	0,000
Manufactured products n.e.c.	0	1,294	24446,685	0,005
Wastes, scraps	0	0,195	28900,974	0,001
Iron, steel products	0	1,699	227432,696	0,001
Non-ferrous metals	0	0,905	112516,673	0,001
Structural metal products	0	0,729	50537,284	0,001
Tanks, reservoirs	0	0,074	10008,335	0,001
Other fabricated metal	0	2,667	84475,043	0,003
Engines, turbines	0	0,014	22203,027	0,000
Pumps, compressors	0	1,276	26702,702	0,005
Bearings, gears	0	0,389	14521,061	0,003
Lifting equipment	0	0,583	16566,850	0,004
General machinery	0	0,791	39840,269	0,002
Special machinery	0	2,027	129122,735	0,002
Domestic appliances	0	0,425	20964,210	0,002
Office machinery	0	0,537	41819,827	0,001
Electrical machinery	0	1,327	115367,592	0,001
Radio, television	0	3,153	111495,095	0,003
Medical appliances	0	2,148	48771,171	0,004
Motor vehicles, parts	0	2,965	473755,701	0,001
Ships and boats	0	0,002	21339,970	0,000
Railway and trams	0	0,020	6397,251	0,000
Aircrafts	0	0,002	20472,559	0,000
Other transport equipment	0	0,027	5179,305	0,001
Construction	0	0,368	188445,991	0,000
Construction services	0	0,177	174152,701	0,000
Trade services	0	2,922	824432,156	0,000
Accommodation	0	0,470	53514,470	0,001
Catering services	0	0,549	61746,935	0,001
Passenger transport	0	5,853	211954,667	0,003
Freight transport	0	0,833	286152,780	0,000
Supporting transport services	0	0,639	77099,408	0,001
Postal, courier services	0	0,681	14995,720	0,005
Electricity distribution	0	2,509	153255,300	0,002
Water distribution	0	0,670	58306,417	0,001
Financial services	0	5,953	317039,701	0,002
Insurance, pension	0	0,879	172499,360	0,001

Other financial services	0	2,497	201102,840	0,001
Real estate services	0	6,870	451571,714	0,002
Leasing, Rental services	0	3,957	124570,907	0,003
Research, development	0	0,002	37075,085	0,000
Legal, accounting	0	2,720	56988,944	0,005
Other business services	0	7,961	255457,253	0,003
Telecommunications	0	9,492	206060,371	0,005
Support services	0	5,817	152487,893	0,004
Manufactured services n.e.c.	0	0,163	6553,722	0,002
Public administration	0	0,318	942597,880	0,000
Education services	0	1,095	70882,126	0,002
Health, social services	0	5,250	190455,988	0,003
Other services n.e.c.	0	3,944	220234,905	0,002
Margins	0	20,213	984008,954	0,002
Labor with primary school education (grades 1-7)	0	1,089	102122,903	0,001
Labor with middle school education (grades 8-11)	0	2,305	186441,534	0,001
Labor completed sedondary school education (grade 12)	0	7,731	481024,873	0,002
Labor with tertiary education (certificates, diplomas or degrees)	0	38,781	1146950,690	0,003
Capital	0	22,574	1734918,000	0,001
Enterprises	0	0,000	1837795,000	0,000
Households - Decile 1	0	0,000	65989,544	0,000
Households - Decile 2	0	0,000	90984,903	0,000
Households - Decile 3	0	0,000	106450,112	0,000
Households - Decile 4	0	0,000	123492,063	0,000
Households - Decile 5	0	0,000	139019,685	0,000
Households - Decile 6	0	0,000	183900,301	0,000
Households - Decile 7	0	0,000	222467,418	0,000
Households - Decile 8	0	0,000	340905,811	0,000
Households - Decile 9	0	0,000	639532,413	0,000
Households - Percentile 90-92	0	0,000	177769,098	0,000
Households - Percentile 92-94	0	0,000	205886,070	0,000
Households - Percentile 94-96	0	0,000	258606,677	0,000
Households - Percentile 96-98	0	0,000	326808,245	0,000
Households - Percentile 98-100	0	0,000	553080,661	0,000
Government	0	0,000	1912759,000	0,000
Activity taxes	0	1,684	72271,000	0,002
Direct taxes	0	0,000	607552,000	0,000
Import tariffs	0	0,514	44308,000	0,001
Sales taxes	0	6,777	381399,000	0,002
Savings & investment	0	0,000	857400,000	0,000

Change in stocks	0	0,000	29155,000	0,000
Rest of world	0	24,332	1530213,000	0,002

Table 9: Changes in Output Following Business Enablement

Business Enablement	***Change in Final Demand (Rmillion)***	***Change in Output (Rmillion)***	***Original Output (Rmillion)***	**%Change in Output (Rmillion)**
Agriculture	0	0,266	192501,305	0,000
Forestry	0	0,271	19126,046	0,001
Fishing	0	0,015	7162,952	0,000
Mining of coal and lignite	0	0,420	112598,503	0,000
Mining of gold and uranium ore	0	0,075	74075,192	0,000
Mining of metal ores	0	0,328	256827,383	0,000
Other mining and quarrying	0	0,499	90055,887	0,001
Food	0	0,402	301059,878	0,000
Beverages and tobacco	0	0,278	99920,014	0,000
Spinning, weaving and finishing of textiles	0	0,186	31262,752	0,001
Knitted, crouched fabrics, wearing apparel, fur articles	0	0,145	25396,649	0,001
Tanning and dressing of leather	0	0,015	7307,292	0,000
Footwear	0	0,022	9538,647	0,000
Sawmilling, planing of wood, cork, straw	0	0,548	49982,646	0,001
Paper	0	2,383	82209,686	0,003
Publishing, printing, recorded media	0	1,772	47947,110	0,004
Coke oven, petroleum refineries	0	1,590	159956,154	0,001
Nuclear fuel, basic chemicals	0	0,717	115414,232	0,001
Other chemical products, man-made fibres	0	0,896	126864,198	0,001
Rubber	0	0,083	20794,812	0,000
Plastic	0	0,704	34577,588	0,002
Glass	0	0,038	9774,333	0,000
Non-metallic minerals	0	0,391	46772,853	0,001
Basic iron and steel, casting of metals	0	0,542	165302,044	0,000
Basic precious and non-ferrous metals	0	0,179	48787,524	0,000
Fabricated metal products	0	0,887	94195,114	0,001
Machinery and equipment	0	0,353	96409,127	0,000
Electrical machinery and apparatus	0	0,286	50179,042	0,001
Radio, television, communication equipment and apparatus	0	0,142	14055,809	0,001
Medical, precision, optical instruments, watches and clocks	0	0,017	9581,494	0,000
Motor vehicles, trailers, parts	0	0,919	187515,943	0,000
Other transport equipment	0	0,009	18603,958	0,000

Furniture	0	0,139	20697,563	0,001
Manufacturing n.e.c, recycling	0	0,143	51473,188	0,000
Electricity, gas, steam and hot water supply	0	1,021	177694,919	0,001
Collection, purification and distribution of water	0	0,678	63127,992	0,001
Construction	0	2,687	409535,171	0,001
Wholesale trade, commission trade	0	34,898	339975,767	0,010
Retail trade	0	27,997	272731,150	0,010
Sale, maintenance, repair of motor vehicles	0	10,548	135931,500	0,008
Hotels and restaurants	0	0,463	80299,547	0,001
Land transport, transport via pipe lines	0	1,931	376743,969	0,001
Water transport	0	0,020	4328,999	0,000
Air transport	0	0,301	43078,400	0,001
Auxiliary transport	0	0,534	80133,908	0,001
Post and telecommunication	0	3,013	196920,652	0,002
Financial intermediation	0	3,831	251542,743	0,002
Insurance and pension funding	0	0,932	170535,427	0,001
Activities to financial intermediation	0	2,751	193787,000	0,001
Real estate activities	0	4,577	370520,854	0,001
Renting of machinery and equipment	0	0,576	24803,500	0,002
Computer and related activities	0	0,564	32130,004	0,002
Research and experimental development	0	0,001	15521,998	0,000
Other business activities	0	4,720	314577,919	0,002
Government	0	0,049	922105,484	0,000
Education	0	0,395	82890,796	0,000
Health and social work	0	0,593	173324,308	0,000
Sewerage and refuse disposal	0	0,001	2073,565	0,000
Activities of membership organisations	0	0,016	4450,313	0,000
Recreational, cultural and sporting activities	0	0,245	41670,930	0,001
Other activities	0	0,019	5213,592	0,000
Non-observed, informal, non-profit, households,	0	13,984	460425,681	0,003
Agriculture	0	0,177	180281,758	0,000
Live animal	0	0,167	60151,966	0,000
Forestry	0	0,321	22602,766	0,001
Fishing	0	0,021	9585,700	0,000
Coal and lignite	0	0,358	101385,672	0,000
Metal ores	0	0,208	305813,415	0,000
Other minerals	0	1,598	281738,182	0,001
Electricity and gas	0	0,177	45823,919	0,000
Natural water	0	0,110	12808,135	0,001
Meat	0	0,073	80793,267	0,000
Fish	0	0,024	28952,653	0,000

Vegetables	0	0,004	13427,712	0,000
Fruit and nuts	0	0,039	33075,557	0,000
Oils and fats	0	0,035	32010,606	0,000
Dairy products	0	0,055	54893,986	0,000
Grain mill products	0	0,022	49230,625	0,000
Starches products	0	0,010	19698,433	0,000
Animal feeding	0	0,029	26962,848	0,000
Bakery products	0	0,132	94295,122	0,000
Sugar	0	0,084	28901,373	0,000
Confectionary products	0	0,016	15114,035	0,000
Pasta products	0	0,001	2154,131	0,000
Food n.e.c.	0	0,191	48165,285	0,000
Alcohol, beverages	0	0,068	118973,042	0,000
Soft drinks	0	0,271	52601,015	0,001
Tobacco products	0	0,261	72628,185	0,000
Textile fabrics	0	0,201	32217,334	0,001
Made-up textile, articles	0	0,024	20888,734	0,000
Carpets	0	0,009	4811,722	0,000
Textile n.e.c.	0	0,107	11425,917	0,001
Knitting fabrics	0	0,015	6070,420	0,000
Wearing apparel	0	0,448	74845,980	0,001
Leather products	0	0,047	22157,748	0,000
Footwear	0	0,079	33570,329	0,000
Wood products	0	0,794	71705,780	0,001
Paper products	0	3,745	128260,101	0,003
Printing	0	3,220	82740,048	0,004
Petroleum products	0	4,125	391528,825	0,001
Basic chemicals	0	1,124	189458,137	0,001
Fertilizers, pesticides	0	0,141	41738,580	0,000
Paint, related products	0	0,563	41305,048	0,001
Pharmaceutical products	0	0,107	72926,367	0,000
Soap, cleaning, perfume	0	0,181	66794,935	0,000
Chemical products, n.e.c.	0	0,272	49003,546	0,001
Rubber tyres	0	0,121	30955,850	0,000
Other rubber products	0	0,048	13217,025	0,000
Plastic products	0	1,966	87447,265	0,002
Glass products	0	0,087	22664,797	0,000
Non-structural ceramic	0	0,158	8266,009	0,002
Structure non-refractory clay	0	0,140	23792,183	0,001
Plaster, cement	0	0,139	18417,012	0,001
Articles of concrete	0	0,262	30187,654	0,001
Non-metallic products n.e.c.	0	0,112	15993,323	0,001

Furniture	0	0,266	40435,996	0,001
Jewellery	0	0,028	20283,650	0,000
Manufactured products n.e.c.	0	0,119	24446,685	0,000
Wastes, scraps	0	0,074	28900,974	0,000
Iron, steel products	0	0,741	227432,696	0,000
Non-ferrous metals	0	0,401	112516,673	0,000
Structural metal products	0	0,392	50537,284	0,001
Tanks, reservoirs	0	0,342	10008,335	0,003
Other fabricated metal	0	0,727	84475,043	0,001
Engines, turbines	0	0,007	22203,027	0,000
Pumps, compressors	0	0,063	26702,702	0,000
Bearings, gears	0	0,042	14521,061	0,000
Lifting equipment	0	0,455	16566,850	0,003
General machinery	0	0,177	39840,269	0,000
Special machinery	0	0,237	129122,735	0,000
Domestic appliances	0	0,028	20964,210	0,000
Office machinery	0	0,060	41819,827	0,000
Electrical machinery	0	0,617	115367,592	0,001
Radio, television	0	1,157	111495,095	0,001
Medical appliances	0	0,077	48771,171	0,000
Motor vehicles, parts	0	2,333	473755,701	0,000
Ships and boats	0	0,001	21339,970	0,000
Railway and trams	0	0,008	6397,251	0,000
Aircrafts	0	0,001	20472,559	0,000
Other transport equipment	0	0,015	5179,305	0,000
Construction	0	0,052	188445,991	0,000
Construction services	0	0,030	174152,701	0,000
Trade services	84,9	85,377	824432,156	0,010
Accommodation	0	0,221	53514,470	0,000
Catering services	0	0,230	61746,935	0,000
Passenger transport	0	1,531	211954,667	0,001
Freight transport	0	1,013	286152,780	0,000
Supporting transport services	0	0,464	77099,408	0,001
Postal, courier services	0	0,509	14995,720	0,003
Electricity distribution	0	0,941	153255,300	0,001
Water distribution	0	0,654	58306,417	0,001
Financial services	0	4,883	317039,701	0,002
Insurance, pension	0	0,836	172499,360	0,000
Other financial services	0	2,855	201102,840	0,001
Real estate services	0	5,576	451571,714	0,001
Leasing, Rental services	0	3,044	124570,907	0,002
Research, development	0	0,001	37075,085	0,000

Legal, accounting	0	0,532	56988,944	0,001
Other business services	0	4,705	255457,253	0,002
Telecommunications	0	2,915	206060,371	0,001
Support services	0	1,717	152487,893	0,001
Manufactured services n.e.c.	0	0,154	6553,722	0,002
Public administration	0	0,050	942597,880	0,000
Education services	0	0,326	70882,126	0,000
Health, social services	0	0,538	190455,988	0,000
Other services n.e.c.	0	0,773	220234,905	0,000
Margins	0	7,396	984008,954	0,001
Labor with primary school education (grades 1-7)	0	2,350	102122,903	0,002
Labor with middle school education (grades 8-11)	0	4,321	186441,534	0,002
Labor completed sedondary school education (grade 12)	0	8,758	481024,873	0,002
Labor with tertiary education (certificates, diplomas or degrees)	0	16,494	1146950,690	0,001
Capital	0	33,551	1734918,000	0,002
Enterprises	0	0,000	1837795,000	0,000
Households - Decile 1	0	0,000	65989,544	0,000
Households - Decile 2	0	0,000	90984,903	0,000
Households - Decile 3	0	0,000	106450,112	0,000
Households - Decile 4	0	0,000	123492,063	0,000
Households - Decile 5	0	0,000	139019,685	0,000
Households - Decile 6	0	0,000	183900,301	0,000
Households - Decile 7	0	0,000	222467,418	0,000
Households - Decile 8	0	0,000	340905,811	0,000
Households - Decile 9	0	0,000	639532,413	0,000
Households - Percentile 90-92	0	0,000	177769,098	0,000
Households - Percentile 92-94	0	0,000	205886,070	0,000
Households - Percentile 94-96	0	0,000	258606,677	0,000
Households - Percentile 96-98	0	0,000	326808,245	0,000
Households - Percentile 98-100	0	0,000	553080,661	0,000
Government	0	0,000	1912759,000	0,000
Activity taxes	0	1,448	72271,000	0,002
Direct taxes	0	0,000	607552,000	0,000
Import tariffs	0	0,235	44308,000	0,001
Sales taxes	0	2,250	381399,000	0,001
Savings & investment	0	0,000	857400,000	0,000
Change in stocks	0	0,000	29155,000	0,000
Rest of world	0	8,095	1530213,000	0,001

Table 10: Changes in Output Following Tourist Experience (million)

Tourist Experience	***Change in Final Demand (Rmillion)***	***Change in Output (Rmillion)***	***Original Output (Rmillion)***	***%Change in Output (Rmillion)***
Agriculture	0	0,456	192501,305	0,000
Forestry	0	0,203	19126,046	0,001
Fishing	0	0,032	7162,952	0,000
Mining of coal and lignite	0	0,500	112598,503	0,000
Mining of gold and uranium ore	0	0,105	74075,192	0,000
Mining of metal ores	0	0,453	256827,383	0,000
Other mining and quarrying	0	0,715	90055,887	0,001
Food	0	1,161	301059,878	0,000
Beverages and tobacco	0	0,218	99920,014	0,000
Spinning, weaving and finishing of textiles	0	0,225	31262,752	0,001
Knitted, crouched fabrics, wearing apparel, fur articles	0	0,084	25396,649	0,000
Tanning and dressing of leather	0	0,068	7307,292	0,001
Footwear	0	0,117	9538,647	0,001
Sawmilling, planing of wood, cork, straw	0	0,658	49982,646	0,001
Paper	0	1,437	82209,686	0,002
Publishing, printing, recorded media	0	1,400	47947,110	0,003
Coke oven, petroleum refineries	0	1,287	159956,154	0,001
Nuclear fuel, basic chemicals	0	1,218	115414,232	0,001
Other chemical products, man-made fibres	0	1,556	126864,198	0,001
Rubber	0	0,108	20794,812	0,001
Plastic	0	0,223	34577,588	0,001
Glass	0	0,117	9774,333	0,001
Non-metallic minerals	0	0,410	46772,853	0,001
Basic iron and steel, casting of metals	0	0,675	165302,044	0,000
Basic precious and non-ferrous metals	0	0,242	48787,524	0,000
Fabricated metal products	0	0,826	94195,114	0,001
Machinery and equipment	0	0,367	96409,127	0,000
Electrical machinery and apparatus	0	0,340	50179,042	0,001
Radio, television, communication equipment and apparatus	0	0,373	14055,809	0,003
Medical, precision, optical instruments, watches and clocks	0	0,058	9581,494	0,001
Motor vehicles, trailers, parts	0	2,390	187515,943	0,001
Other transport equipment	0	0,013	18603,958	0,000

Furniture	0	0,247	20697,563	0,001
Manufacturing n.e.c, recycling	0	0,194	51473,188	0,000
Electricity, gas, steam and hot water supply	0	1,333	177694,919	0,001
Collection, purification and distribution of water	0	0,344	63127,992	0,001
Construction	0	3,497	409535,171	0,001
Wholesale trade, commission trade	0	0,203	339975,767	0,000
Retail trade	0	0,180	272731,150	0,000
Sale, maintenance, repair of motor vehicles	0	0,663	135931,500	0,000
Hotels and restaurants	0	0,525	80299,547	0,001
Land transport, transport via pipe lines	0	0,823	376743,969	0,000
Water transport	0	0,010	4328,999	0,000
Air transport	0	0,143	43078,400	0,000
Auxiliary transport	0	0,348	80133,908	0,000
Post and telecommunication	0	3,292	196920,652	0,002
Financial intermediation	0	2,669	251542,743	0,001
Insurance and pension funding	0	0,642	170535,427	0,000
Activities to financial intermediation	0	1,295	193787,000	0,001
Real estate activities	0	3,186	370520,854	0,001
Renting of machinery and equipment	0	0,519	24803,500	0,002
Computer and related activities	0	1,475	32130,004	0,005
Research and experimental development	0	0,004	15521,998	0,000
Other business activities	0	12,019	314577,919	0,004
Government	0	0,200	922105,484	0,000
Education	0	0,573	82890,796	0,001
Health and social work	0	3,201	173324,308	0,002
Sewerage and refuse disposal	0	0,001	2073,565	0,000
Activities of membership organisations	0	0,027	4450,313	0,001
Recreational, cultural and sporting activities	65	65,425	41670,930	0,157
Other activities	0	0,033	5213,592	0,001
Non-observed, informal, non-profit, households,	0	1,833	460425,681	0,000
Agriculture	0	0,372	180281,758	0,000
Live animal	0	0,211	60151,966	0,000
Forestry	0	0,240	22602,766	0,001
Fishing	0	0,043	9585,700	0,000
Coal and lignite	0	0,385	101385,672	0,000
Metal ores	0	0,282	305813,415	0,000
Other minerals	0	2,370	281738,182	0,001
Electricity and gas	0	0,251	45823,919	0,001
Natural water	0	0,061	12808,135	0,000
Meat	0	0,212	80793,267	0,000
Fish	0	0,042	28952,653	0,000

Vegetables	0	0,037	13427,712	0,000
Fruit and nuts	0	0,080	33075,557	0,000
Oils and fats	0	0,119	32010,606	0,000
Dairy products	0	0,073	54893,986	0,000
Grain mill products	0	0,046	49230,625	0,000
Starches products	0	0,009	19698,433	0,000
Animal feeding	0	0,036	26962,848	0,000
Bakery products	0	0,981	94295,122	0,001
Sugar	0	0,076	28901,373	0,000
Confectionary products	0	0,049	15114,035	0,000
Pasta products	0	0,002	2154,131	0,000
Food n.e.c.	0	0,208	48165,285	0,000
Alcohol, beverages	0	0,053	118973,042	0,000
Soft drinks	0	0,215	52601,015	0,000
Tobacco products	0	0,199	72628,185	0,000
Textile fabrics	0	0,225	32217,334	0,001
Made-up textile, articles	0	0,149	20888,734	0,001
Carpets	0	0,017	4811,722	0,000
Textile n.e.c.	0	0,073	11425,917	0,001
Knitting fabrics	0	0,174	6070,420	0,003
Wearing apparel	0	0,119	74845,980	0,000
Leather products	0	0,218	22157,748	0,001
Footwear	0	0,414	33570,329	0,001
Wood products	0	0,949	71705,780	0,001
Paper products	0	2,294	128260,101	0,002
Printing	0	2,466	82740,048	0,003
Petroleum products	0	3,050	391528,825	0,001
Basic chemicals	0	2,005	189458,137	0,001
Fertilizers, pesticides	0	0,389	41738,580	0,001
Paint, related products	0	1,716	41305,048	0,004
Pharmaceutical products	0	0,183	72926,367	0,000
Soap, cleaning, perfume	0	0,346	66794,935	0,001
Chemical products, n.e.c.	0	0,471	49003,546	0,001
Rubber tyres	0	0,077	30955,850	0,000
Other rubber products	0	0,158	13217,025	0,001
Plastic products	0	0,495	87447,265	0,001
Glass products	0	0,272	22664,797	0,001
Non-structural ceramic	0	0,138	8266,009	0,002
Structure non-refractory clay	0	0,179	23792,183	0,001
Plaster, cement	0	0,216	18417,012	0,001
Articles of concrete	0	0,226	30187,654	0,001
Non-metallic products n.e.c.	0	0,098	15993,323	0,001

Furniture	0	0,486	40435,996	0,001
Jewellery	0	0,011	20283,650	0,000
Manufactured products n.e.c.	0	0,278	24446,685	0,001
Wastes, scraps	0	0,091	28900,974	0,000
Iron, steel products	0	0,913	227432,696	0,000
Non-ferrous metals	0	0,550	112516,673	0,000
Structural metal products	0	0,324	50537,284	0,001
Tanks, reservoirs	0	0,251	10008,335	0,003
Other fabricated metal	0	0,796	84475,043	0,001
Engines, turbines	0	0,006	22203,027	0,000
Pumps, compressors	0	0,099	26702,702	0,000
Bearings, gears	0	0,390	14521,061	0,003
Lifting equipment	0	0,047	16566,850	0,000
General machinery	0	0,075	39840,269	0,000
Special machinery	0	0,275	129122,735	0,000
Domestic appliances	0	0,140	20964,210	0,001
Office machinery	0	0,164	41819,827	0,000
Electrical machinery	0	0,564	115367,592	0,000
Radio, television	0	3,061	111495,095	0,003
Medical appliances	0	0,281	48771,171	0,001
Motor vehicles, parts	0	6,077	473755,701	0,001
Ships and boats	0	0,001	21339,970	0,000
Railway and trams	0	0,007	6397,251	0,000
Aircrafts	0	0,001	20472,559	0,000
Other transport equipment	0	0,012	5179,305	0,000
Construction	0	0,058	188445,991	0,000
Construction services	0	0,056	174152,701	0,000
Trade services	0	0,429	824432,156	0,000
Accommodation	0	0,343	53514,470	0,001
Catering services	0	0,369	61746,935	0,001
Passenger transport	0	0,688	211954,667	0,000
Freight transport	0	0,365	286152,780	0,000
Supporting transport services	0	0,295	77099,408	0,000
Postal, courier services	0	0,725	14995,720	0,005
Electricity distribution	0	1,216	153255,300	0,001
Water distribution	0	0,324	58306,417	0,001
Financial services	0	3,402	317039,701	0,001
Insurance, pension	0	0,574	172499,360	0,000
Other financial services	0	1,344	201102,840	0,001
Real estate services	0	3,880	451571,714	0,001
Leasing, Rental services	0	2,622	124570,907	0,002
Research, development	0	0,008	37075,085	0,000

Legal, accounting	0	4,119	56988,944	0,007
Other business services	0	12,469	255457,253	0,005
Telecommunications	0	2,713	206060,371	0,001
Support services	0	2,442	152487,893	0,002
Manufactured services n.e.c.	0	0,077	6553,722	0,001
Public administration	0	0,204	942597,880	0,000
Education services	0	0,482	70882,126	0,001
Health, social services	0	3,343	190455,988	0,002
Other services n.e.c.	0	1,373	220234,905	0,001
Margins	0	8,216	984008,954	0,001
Labor with primary school education (grades 1-7)	0	0,666	102122,903	0,001
Labor with middle school education (grades 8-11)	0	1,343	186441,534	0,001
Labor completed sedondary school education (grade 12)	0	4,340	481024,873	0,001
Labor with tertiary education (certificates, diplomas or degrees)	0	15,065	1146950,690	0,001
Capital	0	16,959	1734918,000	0,001
Enterprises	0	0,000	1837795,000	0,000
Households - Decile 1	0	0,000	65989,544	0,000
Households - Decile 2	0	0,000	90984,903	0,000
Households - Decile 3	0	0,000	106450,112	0,000
Households - Decile 4	0	0,000	123492,063	0,000
Households - Decile 5	0	0,000	139019,685	0,000
Households - Decile 6	0	0,000	183900,301	0,000
Households - Decile 7	0	0,000	222467,418	0,000
Households - Decile 8	0	0,000	340905,811	0,000
Households - Decile 9	0	0,000	639532,413	0,000
Households - Percentile 90-92	0	0,000	177769,098	0,000
Households - Percentile 92-94	0	0,000	205886,070	0,000
Households - Percentile 94-96	0	0,000	258606,677	0,000
Households - Percentile 96-98	0	0,000	326808,245	0,000
Households - Percentile 98-100	0	0,000	553080,661	0,000
Government	0	0,000	1912759,000	0,000
Activity taxes	0	1,974	72271,000	0,003
Direct taxes	0	0,000	607552,000	0,000
Import tariffs	0	0,423	44308,000	0,001
Sales taxes	0	3,010	381399,000	0,001
Savings & investment	0	0,000	857400,000	0,000
Change in stocks	0	0,000	29155,000	0,000
Rest of world	0	13,004	1530213,000	0,001

Appendix 3: Changes in Employment by Policy Shock

Table 1 Changes in Employment Following Corporate Support

Corporate Support	***Labour coefficient***	***Change in Employment***	***E Original***	***Percentage Change in Employment***
aagri	0,114416885	0,10605664	22025,39969	0,000%
afore	0,164143099	0,103499069	3139,408538	0,003%
afish	0,227610642	0,012059958	1630,364024	0,001%
acoal	0,176692	0,230307524	19895,25473	0,001%
agold	0,474390011	0,103522045	35140,53107	0,000%
amore	0,232611102	0,221219439	59740,90055	0,000%
aomin	0,198691566	0,31584343	17893,34516	0,002%
afood	0,151328993	0,455224655	45559,08818	0,001%
abevt	0,173335195	0,06438271	17319,65506	0,000%
aweav	0,149711019	0,049657807	4680,37847	0,001%
Aknit	0,217536553	0,028233063	5524,699425	0,001%
Aleat	0,087022172	0,002665478	635,8963774	0,000%
afoot	0,148417117	0,003443896	1415,698449	0,000%
awood	0,205945492	0,159768754	10293,70056	0,002%
apapr	0,128859313	0,791765685	10593,48365	0,007%
aprnt	0,283003138	1,811045629	13569,18247	0,013%
Apetr	0,043553621	0,297427555	6966,669764	0,004%
abchm	0,127665622	0,264821573	14734,42973	0,002%
aochm	0,207461378	0,575349432	26319,42135	0,002%
arubb	0,169214503	0,058784488	3518,783855	0,002%
Aplas	0,353286513	0,186808715	12215,79535	0,002%
Aglss	0,304999881	0,028848873	2981,170519	0,001%
anmmi	0,128507407	0,087818741	6010,658031	0,001%
Abisc	0,089728506	0,124463264	14832,30541	0,001%
anfme	0,1331875	0,059420624	6497,888336	0,001%
afabm	0,261650356	0,633355705	24646,1851	0,003%
amach	0,237827105	0,485543392	22928,70356	0,002%
aemch	0,143286608	0,104985616	7189,984727	0,001%
Ardtv	0,230494963	0,096890158	3239,793222	0,003%
amopt	0,141915704	0,056527291	1359,764474	0,004%
amtvp	0,133386728	0,197822754	25012,13802	0,001%
Aotrp	0,266160412	0,006208274	4951,637025	0,000%

afurn	0,197422345	0,121208416	4086,161348	0,003%
aomnf	0,099958814	0,048157671	5145,198776	0,001%
aelcg	0,172792154	0,513800034	30704,28789	0,002%
awatd	0,127392013	0,110147024	8042,00191	0,001%
acnst	0,142232436	0,68939885	58249,18507	0,001%
awtrd	0,264028363	2,28214043	89763,24535	0,003%
Artrd	0,268874266	1,878496749	73330,38755	0,003%
amtvs	0,301697581	1,229083907	41010,20455	0,003%
aacct	0,179430832	0,189976637	14408,21446	0,001%
Altrp	0,163318478	1,404591233	61529,25146	0,002%
awtrp	0,032109046	0,00254739	139,000033	0,002%
Aatrp	0,107949676	0,12763287	4650,29935	0,003%
Atrps	0,261519115	0,225432603	20956,54884	0,001%
apost	0,142386933	1,36065895	28038,92771	0,005%
Afins	0,340466229	1,892360716	85641,80894	0,002%
ainsp	0,218859838	0,275507275	37323,35586	0,001%
Aofin	0,304272288	0,939920436	58964,014	0,002%
Areal	0,040491658	0,270587118	15003,00356	0,002%
Aren’t	0,134335914	0,123802645	3332,000791	0,004%
acomp	0,230582038	29,30784684	7408,60176	0,396%
Arsea	0,285530326	0,000646006	4432,001053	0,000%
aobus	0,292203032	3,465304062	91920,62183	0,004%
apuba	0,589512521	0,195498037	543592,7291	0,000%
aeduc	0,187316848	0,260690461	15526,84264	0,002%
aheal	0,211535837	1,043359648	36664,3026	0,003%
awast	0,180677437	0,000329461	374,6464011	0,000%
amorg	0,198893834	0,015759398	885,1397723	0,002%
Arecr	0,14632602	0,139049833	6097,541312	0,002%
aoact	0,159686748	0,015784936	832,5416113	0,002%
anobs	0,229217492	1,904092099	105537,6196	0,002%
Cagri	0	0	0	0
Clani	0	0	0	0
Cfore	0	0	0	0
Cfish	0	0	0	0
ccoal	0	0	0	0
cmore	0	0	0	0
comin	0	0	0	0
celcg	0	0	0	0
cwatr	0	0	0	0
cmeat	0	0	0	0
Cpfis	0	0	0	0
cvege	0	0	0	0
Cfrui	0	0	0	0
Cfats	0	0	0	0
Cdair	0	0	0	0

Cgrai	0	0	0	0
Cstar	0	0	0	0
cafee	0	0	0	0
cbake	0	0	0	0
csuga	0	0	0	0
cconf	0	0	0	0
cpast	0	0	0	0
cofoo	0	0	0	0
calcb	0	0	0	0
Csftd	0	0	0	0
ctoba	0	0	0	0
Ctexf	0	0	0	0
ctexm	0	0	0	0
ccarp	0	0	0	0
cotex	0	0	0	0
Cknit	0	0	0	0
cwear	0	0	0	0
Cleat	0	0	0	0
cfoot	0	0	0	0
cwood	0	0	0	0
cpapp	0	0	0	0
cprnt	0	0	0	0
Cpetr	0	0	0	0
cbchm	0	0	0	0
Cfert	0	0	0	0
cpain	0	0	0	0
cphar	0	0	0	0
csoap	0	0	0	0
coche	0	0	0	0
Ctyre	0	0	0	0
corub	0	0	0	0
Cplas	0	0	0	0
Cglas	0	0	0	0
ccera	0	0	0	0
cclay	0	0	0	0
ccmnt	0	0	0	0
cconc	0	0	0	0
conmp	0	0	0	0
cfurn	0	0	0	0
cjewl	0	0	0	0
comnf	0	0	0	0
cwast	0	0	0	0
Cirst	0	0	0	0
cnfme	0	0	0	0
Cstrm	0	0	0	0

ctank	0	0	0	0
cofbm	0	0	0	0
cengt	0	0	0	0
cpump	0	0	0	0
cgear	0	0	0	0
Clift	0	0	0	0
cgenm	0	0	0	0
cspcm	0	0	0	0
cdoma	0	0	0	0
coffm	0	0	0	0
celcm	0	0	0	0
Crdtv	0	0	0	0
cmeda	0	0	0	0
cmtvp	0	0	0	0
cship	0	0	0	0
Crail	0	0	0	0
Cairc	0	0	0	0
coteq	0	0	0	0
ccnst	0	0	0	0
ccsrv	0	0	0	0
Ctrad	0	0	0	0
cacco	0	0	0	0
Ccats	0	0	0	0
Cptrp	0	0	0	0
Cftrp	0	0	0	0
Ctrps	0	0	0	0
cpost	0	0	0	0
celcd	0	0	0	0
cwatd	0	0	0	0
Cfins	0	0	0	0
cinsp	0	0	0	0
Coffin	0	0	0	0
Creal	0	0	0	0
Crent	0	0	0	0
Crsea	0	0	0	0
Clacc	0	0	0	0
cobus	0	0	0	0
Ctelc	0	0	0	0
csupp	0	0	0	0
cmnfs	0	0	0	0
cpuba	0	0	0	0
ceduc	0	0	0	0
cheal	0	0	0	0
cosrv	0	0	0	0
Trc	0	0	0	0

flab-p	0	0	0	0
flab-m	0	0	0	0
flab-s	0	0	0	0
flab-t	0	0	0	0
Fcap	0	0	0	0
Ent	0	0	0	0
hhd-0	0	0	0	0
hhd-1	0	0	0	0
hhd-2	0	0	0	0
hhd-3	0	0	0	0
hhd-4	0	0	0	0
hhd-5	0	0	0	0
hhd-6	0	0	0	0
hhd-7	0	0	0	0
hhd-8	0	0	0	0
hhd-91	0	0	0	0
hhd-92	0	0	0	0
hhd-93	0	0	0	0
hhd-94	0	0	0	0
hhd-95	0	0	0	0
Gov	0	0	0	0
Atax	0	0	0	0
Dtax	0	0	0	0
Mtax	0	0	0	0
Stax	0	0	0	0
s-i	0	0	0	0
Dstk	0	0	0	0
Row	0,006853948	0,207634512	10488	0,002%

Table 2 Changes in Employment Following Business Enablement

Business Enablement	***Labour coefficient***	***Change in Employment***	***E Original***	***Percentage Change in Employment***
Aagri	0,114416885	0,033398281	22025,39969	0,000%
Afore	0,164143099	0,048197347	3139,408538	0,002%
Afish	0,227610642	0,003839887	1630,364024	0,000%
acoal	0,176692	0,081800185	19895,25473	0,000%
agold	0,474390011	0,039325473	35140,53107	0,000%
amore	0,232611102	0,084294067	59740,90055	0,000%
aomin	0,198691566	0,110111173	17893,34516	0,001%
afood	0,151328993	0,066377771	45559,08818	0,000%
abevt	0,173335195	0,054417558	17319,65506	0,000%
aweav	0,149711019	0,030453523	4680,37847	0,001%
Aknit	0,217536553	0,034178963	5524,699425	0,001%
Aleat	0,087022172	0,001471052	635,8963774	0,000%
afoot	0,148417117	0,003626013	1415,698449	0,000%
awood	0,205945492	0,123305213	10293,70056	0,001%
apapr	0,128859313	0,332125832	10593,48365	0,003%
aprnt	0,283003138	0,541673432	13569,18247	0,004%
apetr	0,043553621	0,077451794	6966,669764	0,001%
abchm	0,127665622	0,100524824	14734,42973	0,001%
aochm	0,207461378	0,203803636	26319,42135	0,001%
arubb	0,169214503	0,017007534	3518,783855	0,000%
aplas	0,353286513	0,269601482	12215,79535	0,002%
aglss	0,304999881	0,012676113	2981,170519	0,000%
anmmi	0,128507407	0,055224108	6010,658031	0,001%
abisc	0,089728506	0,05340476	14832,30541	0,000%
anfme	0,1331875	0,026133513	6497,888336	0,000%
afabm	0,261650356	0,252988535	24646,1851	0,001%
amach	0,237827105	0,09127744	22928,70356	0,000%
aemch	0,143286608	0,045031694	7189,984727	0,001%
ardtv	0,230494963	0,035556662	3239,793222	0,001%
amopt	0,141915704	0,002621818	1359,764474	0,000%
amtvp	0,133386728	0,135039045	25012,13802	0,001%
aotrp	0,266160412	0,002629119	4951,637025	0,000%
afurn	0,197422345	0,029777593	4086,161348	0,001%
aomnf	0,099958814	0,015580222	5145,198776	0,000%
aelcg	0,172792154	0,193363177	30704,28789	0,001%
awatd	0,127392013	0,093751407	8042,00191	0,001%
acnst	0,142232436	0,420345537	58249,18507	0,001%
awtrd	0,264028363	9,929876706	89763,24535	0,011%
artrd	0,268874266	8,112486962	73330,38755	0,011%

amtvs	0,301697581	3,433882017	41010,20455	0,008%
aacct	0,179430832	0,092381357	14408,21446	0,001%
altrp	0,163318478	0,544004172	61529,25146	0,001%
awtrp	0,032109046	0,001336434	139,000033	0,001%
aatrp	0,107949676	0,03902894	4650,29935	0,001%
atrps	0,261519115	0,152977874	20956,54884	0,001%
apost	0,142386933	0,467087811	28038,92771	0,002%
afins	0,340466229	1,414773067	85641,80894	0,002%
ainsp	0,218859838	0,223818058	37323,35586	0,001%
aofin	0,304272288	0,913127284	58964,014	0,002%
areal	0,040491658	0,200771797	15003,00356	0,001%
arent	0,134335914	0,08528223	3332,000791	0,003%
acomp	0,230582038	0,141194198	7408,60176	0,002%
arsea	0,285530326	0,000336531	4432,001053	0,000%
aobus	0,292203032	1,506466428	91920,62183	0,002%
apuba	0,589512521	0,033714454	543592,7291	0,000%
aeduc	0,187316848	0,0816736	15526,84264	0,001%
aheal	0,211535837	0,13725312	36664,3026	0,000%
awast	0,180677437	0,000136274	374,6464011	0,000%
amorg	0,198893834	0,003470244	885,1397723	0,000%
arecr	0,14632602	0,039476155	6097,541312	0,001%
aoact	0,159686748	0,003302639	832,5416113	0,000%
anobs	0,229217492	3,516318765	105537,6196	0,003%
cagri	0	0	0	0,000%
clani	0	0	0	0,000%
cfore	0	0	0	0,000%
cfish	0	0	0	0,000%
ccoal	0	0	0	0,000%
cmore	0	0	0	0,000%
comin	0	0	0	0,000%
celcg	0	0	0	0,000%
cwatr	0	0	0	0,000%
cmeat	0	0	0	0,000%
cpfis	0	0	0	0,000%
cvege	0	0	0	0,000%
cfrui	0	0	0	0,000%
cfats	0	0	0	0,000%
cdair	0	0	0	0,000%
cgrai	0	0	0	0,000%
cstar	0	0	0	0,000%
cafee	0	0	0	0,000%
cbake	0	0	0	0,000%
csuga	0	0	0	0,000%
cconf	0	0	0	0,000%
cpast	0	0	0	0,000%

cofoo	0	0	0	0,000%
calcb	0	0	0	0,000%
csftd	0	0	0	0,000%
ctoba	0	0	0	0,000%
ctexf	0	0	0	0,000%
ctexm	0	0	0	0,000%
ccarp	0	0	0	0,000%
cotex	0	0	0	0,000%
cknit	0	0	0	0,000%
cwear	0	0	0	0,000%
cleat	0	0	0	0,000%
cfoot	0	0	0	0,000%
cwood	0	0	0	0,000%
cpapp	0	0	0	0,000%
cprnt	0	0	0	0,000%
cpetr	0	0	0	0,000%
cbchm	0	0	0	0,000%
cfert	0	0	0	0,000%
cpain	0	0	0	0,000%
cphar	0	0	0	0,000%
csoap	0	0	0	0,000%
coche	0	0	0	0,000%
ctyre	0	0	0	0,000%
corub	0	0	0	0,000%
cplas	0	0	0	0,000%
cglas	0	0	0	0,000%
ccera	0	0	0	0,000%
cclay	0	0	0	0,000%
ccmnt	0	0	0	0,000%
cconc	0	0	0	0,000%
conmp	0	0	0	0,000%
cfurn	0	0	0	0,000%
cjewl	0	0	0	0,000%
comnf	0	0	0	0,000%
cwast	0	0	0	0,000%
cirst	0	0	0	0,000%
cnfme	0	0	0	0,000%
cstrm	0	0	0	0,000%
ctank	0	0	0	0,000%
cofbm	0	0	0	0,000%
cengt	0	0	0	0,000%
cpump	0	0	0	0,000%
cgear	0	0	0	0,000%
clift	0	0	0	0,000%
cgenm	0	0	0	0,000%

cspcm	0	0	0	0,000%
cdoma	0	0	0	0,000%
coffm	0	0	0	0,000%
celcm	0	0	0	0,000%
crdtv	0	0	0	0,000%
cmeda	0	0	0	0,000%
cmtvp	0	0	0	0,000%
cship	0	0	0	0,000%
crail	0	0	0	0,000%
cairc	0	0	0	0,000%
coteq	0	0	0	0,000%
ccnst	0	0	0	0,000%
ccsrv	0	0	0	0,000%
ctrad	0	0	0	0,000%
cacco	0	0	0	0,000%
ccats	0	0	0	0,000%
cptrp	0	0	0	0,000%
cftrp	0	0	0	0,000%
ctrps	0	0	0	0,000%
cpost	0	0	0	0,000%
celcd	0	0	0	0,000%
cwatd	0	0	0	0,000%
cfins	0	0	0	0,000%
cinsp	0	0	0	0,000%
cofin	0	0	0	0,000%
creal	0	0	0	0,000%
crent	0	0	0	0,000%
crsea	0	0	0	0,000%
clacc	0	0	0	0,000%
cobus	0	0	0	0,000%
ctelc	0	0	0	0,000%
csupp	0	0	0	0,000%
cmnfs	0	0	0	0,000%
cpuba	0	0	0	0,000%
ceduc	0	0	0	0,000%
cheal	0	0	0	0,000%
cosrv	0	0	0	0,000%
trc	0	0	0	0,000%
flab-p	0	0	0	0,000%
flab-m	0	0	0	0,000%
flab-s	0	0	0	0,000%
flab-t	0	0	0	0,000%
fcap	0	0	0	0,000%
ent	0	0	0	0,000%
hhd-0	0	0	0	0,000%

hhd-1	0	0	0	0,000%
hhd-2	0	0	0	0,000%
hhd-3	0	0	0	0,000%
hhd-4	0	0	0	0,000%
hhd-5	0	0	0	0,000%
hhd-6	0	0	0	0,000%
hhd-7	0	0	0	0,000%
hhd-8	0	0	0	0,000%
hhd-91	0	0	0	0,000%
hhd-92	0	0	0	0,000%
hhd-93	0	0	0	0,000%
hhd-94	0	0	0	0,000%
hhd-95	0	0	0	0,000%
gov	0	0	0	0,000%
atax	0	0	0	0,000%
dtax	0	0	0	0,000%
mtax	0	0	0	0,000%
stax	0	0	0	0,000%
s-i	0	0	0	0,000%
dstk	0	0	0	0,000%
row	0,006853948	0,08962147	10488	0%

Table 11: Changes in Employment Following Tourist Experience

Tourist Experience	***Labour coefficient***	***Change in Employment***	***E Original***	***Percentage Change in Employment***
aagri	0,114416885	0,0555351	22025,39969	0,000%
afore	0,164143099	0,0374378	3139,408538	0,001%
afish	0,227610642	0,0076277	1630,364024	0,000%
acoal	0,176692	0,0967591	19895,25473	0,000%
agold	0,474390011	0,0540251	35140,53107	0,000%
amore	0,232611102	0,1142363	59740,90055	0,000%
aomin	0,198691566	0,1541393	17893,34516	0,001%
Afood	0,151328993	0,1818815	45559,08818	0,000%
Abevt	0,173335195	0,0447961	17319,65506	0,000%
aweav	0,149711019	0,0367057	4680,37847	0,001%
Aknit	0,217536553	0,0211753	5524,699425	0,000%
Aleat	0,087022172	0,0060378	635,8963774	0,001%
Afoot	0,148417117	0,0176852	1415,698449	0,001%
awood	0,205945492	0,1470641	10293,70056	0,001%
Apapr	0,128859313	0,212997	10593,48365	0,002%
Aprnt	0,283003138	0,4409328	13569,18247	0,003%
Apetr	0,043553621	0,0651336	6966,669764	0,001%
abchm	0,127665622	0,1655832	14734,42973	0,001%
aochm	0,207461378	0,3425518	26319,42135	0,001%
Arubb	0,169214503	0,0215857	3518,783855	0,001%
Aplas	0,353286513	0,1017614	12215,79535	0,001%
Aglss	0,304999881	0,0369341	2981,170519	0,001%
anmmi	0,128507407	0,058189	6010,658031	0,001%
Abisc	0,089728506	0,065884	14832,30541	0,000%
anfme	0,1331875	0,0347532	6497,888336	0,001%
Afabm	0,261650356	0,239261	24646,1851	0,001%
amach	0,237827105	0,0953461	22928,70356	0,000%
aemch	0,143286608	0,053199	7189,984727	0,001%
Ardtv	0,230494963	0,0891758	3239,793222	0,003%
amopt	0,141915704	0,0085295	1359,764474	0,001%
amtvp	0,133386728	0,332602	25012,13802	0,001%
Aotrp	0,266160412	0,0037096	4951,637025	0,000%
afurn	0,197422345	0,0513424	4086,161348	0,001%
aomnf	0,099958814	0,0208333	5145,198776	0,000%
aelcg	0,172792154	0,2492136	30704,28789	0,001%
awatd	0,127392013	0,0520308	8042,00191	0,001%
acnst	0,142232436	0,5398713	58249,18507	0,001%
awtrd	0,264028363	0,8486959	89763,24535	0,001%
artrd	0,268874266	0,6981432	73330,38755	0,001%

amtvs	0,301697581	0,4796896	41010,20455	0,001%
aacct	0,179430832	0,1044937	14408,21446	0,001%
altrp	0,163318478	0,3884976	61529,25146	0,001%
awtrp	0,032109046	0,0010944	139,000033	0,001%
aatrp	0,107949676	0,0227277	4650,29935	0,000%
atrps	0,261519115	0,105819	20956,54884	0,001%
apost	0,142386933	0,5110476	28038,92771	0,002%
afins	0,340466229	1,0312413	85641,80894	0,001%
ainsp	0,218859838	0,1624794	37323,35586	0,000%
aofin	0,304272288	0,4783424	58964,014	0,001%
areal	0,040491658	0,1461567	15003,00356	0,001%
arent	0,134335914	0,0785686	3332,000791	0,002%
acomp	0,230582038	0,3525117	7408,60176	0,005%
arsea	0,285530326	0,0011541	4432,001053	0,000%
aobus	0,292203032	3,6533736	91920,62183	0,004%
apuba	0,589512521	0,1228307	543592,7291	0,000%
aeduc	0,187316848	0,1159721	15526,84264	0,001%
aheal	0,211535837	0,6902084	36664,3026	0,002%
awast	0,180677437	0,000195	374,6464011	0,000%
amorg	0,198893834	0,0057009	885,1397723	0,001%
arecr	0,14632602	9,5774034	6097,541312	0,157%
aoact	0,159686748	0,0055787	832,5416113	0,001%
anobs	0,229217492	0,7655001	105537,6196	0,001%
cagri	0	0	0	0,000%
clani	0	0	0	0,000%
cfore	0	0	0	0,000%
cfish	0	0	0	0,000%
ccoal	0	0	0	0,000%
cmore	0	0	0	0,000%
comin	0	0	0	0,000%
celcg	0	0	0	0,000%
cwatr	0	0	0	0,000%
cmeat	0	0	0	0,000%
cpfis	0	0	0	0,000%
cvege	0	0	0	0,000%
cfrui	0	0	0	0,000%
cfats	0	0	0	0,000%
cdair	0	0	0	0,000%
cgrai	0	0	0	0,000%
cstar	0	0	0	0,000%
cafee	0	0	0	0,000%
cbake	0	0	0	0,000%
csuga	0	0	0	0,000%
cconf	0	0	0	0,000%
cpast	0	0	0	0,000%

cofoo	0	0	0	0,000%
calcb	0	0	0	0,000%
csftd	0	0	0	0,000%
ctoba	0	0	0	0,000%
ctexf	0	0	0	0,000%
ctexm	0	0	0	0,000%
ccarp	0	0	0	0,000%
cotex	0	0	0	0,000%
cknit	0	0	0	0,000%
cwear	0	0	0	0,000%
cleat	0	0	0	0,000%
cfoot	0	0	0	0,000%
cwood	0	0	0	0,000%
cpapp	0	0	0	0,000%
cprnt	0	0	0	0,000%
cpetr	0	0	0	0,000%
cbchm	0	0	0	0,000%
cfert	0	0	0	0,000%
cpain	0	0	0	0,000%
cphar	0	0	0	0,000%
csoap	0	0	0	0,000%
coche	0	0	0	0,000%
ctyre	0	0	0	0,000%
corub	0	0	0	0,000%
cplas	0	0	0	0,000%
cglas	0	0	0	0,000%
ccera	0	0	0	0,000%
cclay	0	0	0	0,000%
ccmnt	0	0	0	0,000%
cconc	0	0	0	0,000%
conmp	0	0	0	0,000%
cfurn	0	0	0	0,000%
cjewl	0	0	0	0,000%
comnf	0	0	0	0,000%
cwast	0	0	0	0,000%
cirst	0	0	0	0,000%
cnfme	0	0	0	0,000%
cstrm	0	0	0	0,000%
ctank	0	0	0	0,000%
cofbm	0	0	0	0,000%
cengt	0	0	0	0,000%
cpump	0	0	0	0,000%
cgear	0	0	0	0,000%
clift	0	0	0	0,000%
cgenm	0	0	0	0,000%

cspcm	0	0	0	0,000%
cdoma	0	0	0	0,000%
coffm	0	0	0	0,000%
celcm	0	0	0	0,000%
crdtv	0	0	0	0,000%
cmeda	0	0	0	0,000%
cmtvp	0	0	0	0,000%
cship	0	0	0	0,000%
crail	0	0	0	0,000%
cairc	0	0	0	0,000%
coteq	0	0	0	0,000%
ccnst	0	0	0	0,000%
ccsrv	0	0	0	0,000%
ctrad	0	0	0	0,000%
cacco	0	0	0	0,000%
ccats	0	0	0	0,000%
cptrp	0	0	0	0,000%
cftrp	0	0	0	0,000%
ctrps	0	0	0	0,000%
cpost	0	0	0	0,000%
celcd	0	0	0	0,000%
cwatd	0	0	0	0,000%
cfins	0	0	0	0,000%
cinsp	0	0	0	0,000%
cofin	0	0	0	0,000%
creal	0	0	0	0,000%
crent	0	0	0	0,000%
crsea	0	0	0	0,000%
clacc	0	0	0	0,000%
cobus	0	0	0	0,000%
ctelc	0	0	0	0,000%
csupp	0	0	0	0,000%
cmnfs	0	0	0	0,000%
cpuba	0	0	0	0,000%
ceduc	0	0	0	0,000%
cheal	0	0	0	0,000%
cosrv	0	0	0	0,000%
trc	0	0	0	0,000%
flab-p	0	0	0	0,000%
flab-m	0	0	0	0,000%
flab-s	0	0	0	0,000%
flab-t	0	0	0	0,000%
fcap	0	0	0	0,000%
ent	0	0	0	0,000%
hhd-0	0	0	0	0,000%

hhd-1	0	0	0	0,000%
hhd-2	0	0	0	0,000%
hhd-3	0	0	0	0,000%
hhd-4	0	0	0	0,000%
hhd-5	0	0	0	0,000%
hhd-6	0	0	0	0,000%
hhd-7	0	0	0	0,000%
hhd-8	0	0	0	0,000%
hhd-91	0	0	0	0,000%
hhd-92	0	0	0	0,000%
hhd-93	0	0	0	0,000%
hhd-94	0	0	0	0,000%
hhd-95	0	0	0	0,000%
gov	0	0	0	0,000%
atax	0	0	0	0,000%
Dtax	0	0	0	0,000%
Mtax	0	0	0	0,000%
Stax	0	0	0	0,000%
s-i	0	0	0	0,000%
Dstk	0	0	0	0,000%
Row	0,006853948	0,1115048	10488	0,001%

Appendix 4: Impact of Policy Shock on Output

Table 1: Impact of Corporate Support on Output

Corporate Support	***Direct***	***Indirect***	***Induced***	***Total effect***
	(million)	(million)	(million)	(million)
aagri	0	0,926931715	3,670448421	4,597380136
afore	0	0,630541699	0,287706656	0,918248355
afish	0	0,052985037	0,12897286	0,181957897
acoal	0	1,303440588	0,862876293	2,166316881
agold	0	0,218221383	0,105490858	0,323712241
amore	0	0,951027002	0,451976092	1,403003094
aomin	0	1,589616692	0,781217873	2,370834564
afood	0	3,008178709	6,335265542	9,343444252
abevt	0	0,371434724	2,198714521	2,570149245
aweav	0	0,331691062	0,555648127	0,887339189
aknit	0	0,129785373	0,572817381	0,702602754
aleat	0	0,030629878	0,106927514	0,137557391
afoot	0	0,023204168	0,197748284	0,220952453
awood	0	0,775781747	0,598687766	1,374469514
apapr	0	6,14441956	1,258595045	7,403014605
aprnt	0	6,399383566	0,898481645	7,297865211
apetr	0	6,828997139	2,522493971	9,35149111
abchm	0	2,074337389	1,244489098	3,318826487
aochm	0	2,773284543	2,42964884	5,202933383
arubb	0	0,347396272	0,322845834	0,670242106
aplas	0	0,528773979	0,506462706	1,035236685
aglss	0	0,094586505	0,174350374	0,268936879
anmmi	0	0,683374933	0,354385536	1,037760469
abisc	0	1,387109517	0,665706652	2,05281617
anfme	0	0,446142651	0,247239559	0,69338221
afabm	0	2,420618554	0,762977819	3,183596373
amach	0	2,041581387	0,441617132	2,483198519
aemch	0	0,732696643	0,33406085	1,066757493
ardtv	0	0,420356942	0,200277777	0,620634719
amopt	0	0,398315968	0,089304678	0,487620647
amtvp	0	1,483076745	2,415195848	3,898272592
aotrp	0	0,023325308	0,028715992	0,0520413
afurn	0	0,613954899	0,328559263	0,942514162
aomnf	0	0,481775133	0,707489806	1,189264938
aelcg	0	2,973514828	3,468915614	6,442430443
awatd	0	0,864630534	1,368817443	2,233447977

acnst	0	4,846987574	2,089231048	6,936218622
awtrd	0	8,643542684	4,795258383	13,43880107
artrd	0	6,986524891	3,882814852	10,86933974
amtvs	0	4,073893814	2,290187031	6,364080844
aacct	0	1,058773652	1,960253541	3,019027193
altrp	0	8,600320393	6,2227182	14,82303859
awtrp	0	0,079335593	0,063993079	0,143328672
aatrp	0	1,182336766	0,76811379	1,950450556
atrps	0	0,86201195	0,982002006	1,844013956
apost	0	9,556066131	3,557147718	13,11321385
afins	0	5,558145144	5,733430721	11,29157587
ainsp	0	1,258829747	4,639705614	5,898535362
aofin	0	3,0890767	3,239898017	6,328974716
areal	0	6,682539909	9,331690103	16,01423001
arent	0	0,921590073	0,429832953	1,351423027
acomp	0	127,1037721	0,48367096	127,5874431
arsea	0	0,002262478	0,001153499	0,003415977
aobus	0	11,85923375	5,7055952	17,56482895
apuba	0	0,331626607	1,32690498	1,658531587
aeduc	0	1,391708558	2,302134652	3,69384321
aheal	0	4,932306792	4,370231593	9,302538385
awast	0	0,001823477	0,003849901	0,005673379
amorg	0	0,079235226	0,107448298	0,186683524
arecr	0	0,950274141	0,995235465	1,945509606
aoact	0	0,098849379	0,131284603	0,230133983
anobs	0	8,3069232	7,915258541	16,22218174
cagri	0,07028942	0,683533791	3,373506959	4,127330169
clani	0	0,426163661	1,288060084	1,714223745
cfore	0	0,746947179	0,340820391	1,087767569
cfish	0,019085218	0,052617159	0,174545967	0,246248344
ccoal	0	1,078320462	0,810458586	1,888779048
cmore	0	0,548232961	0,276293173	0,824526134
comin	0	5,388395474	2,446039615	7,834435089
celcg	0	0,498816289	0,399631885	0,898448174
cwatr	0	0,148363167	0,260735986	0,409099153
cmeat	0,572231043	0,136927077	1,972437355	2,681595475
cpfis	0	0,111482105	0,48839392	0,599876025
cvege	0	0,010836811	0,288311346	0,299148157
cfrui	0	0,120032644	0,634852233	0,754884877
cfats	0	0,135161508	0,626315747	0,761477255
cdair	0,061020398	0,113386394	1,183336146	1,357742938
cgrai	0,032311059	0,088365775	0,907841225	1,028518059
cstar	0	0,028091922	0,354924575	0,383016497
cafee	0	0,085896069	0,656006115	0,741902184
cbake	2,04272282	0,289876538	2,088720876	4,421320234

csuga	0,29615883	0,102881185	0,53234987	0,931389885
cconf	0	0,051760151	0,394892323	0,446652474
cpast	0	0,004727281	0,055209266	0,059936547
cofoo	0,629401541	0,204159389	1,008427292	1,841988222
calcb	0	0,092717485	2,798892041	2,891609526
csftd	0	0,361694679	1,077825394	1,439520073
ctoba	0	0,344106799	1,570049879	1,914156679
ctexf	0	0,354578833	0,575914221	0,930493054
ctexm	0	0,068883123	0,49340211	0,562285234
ccarp	0	0,015636364	0,072681098	0,088317462
cotex	0	0,168912615	0,175545196	0,344457812
cknit	0	0,024812477	0,059130995	0,083943472
cwear	0,187288805	0,157229653	1,759038787	2,103557244
cleat	0	0,091127913	0,277478455	0,368606369
cfoot	0	0,081045133	0,697794066	0,778839199
cwood	0,002957021	1,077565598	0,856670306	1,937192925
cpapp	5,051662123	4,762371987	1,956417971	11,77045208
cprnt	9,597126478	2,123954157	1,580053835	13,30113447
cpetr	13,71288449	4,551468292	6,556674509	24,82102729
cbchm	0,015748441	2,723568402	1,885179386	4,624496229
cfert	0,157145618	0,326374581	0,623857551	1,107377749
cpain	1,529066355	1,082887393	0,555637737	3,167591485
cphar	0,589989811	0,309504828	1,44075075	2,340245389
csoap	0,16316994	0,162777928	1,505479281	1,831427149
coche	0,648131613	0,470024742	0,322047929	1,440204284
ctyre	0,336664158	0,27699744	0,555351429	1,169013028
corub	0	0,118149856	0,1263626	0,244512456
cplas	0,003248677	1,270364984	1,251380601	2,524994262
cglas	0,043865237	0,177737464	0,409629238	0,631231939
ccera	0,341422442	0,094590665	0,163690012	0,599703119
cclay	0	0,251145814	0,135919175	0,387064989
ccmnt	0	0,230322133	0,164553582	0,394875715
cconc	0	0,353237425	0,182643715	0,53588114
conmp	0	0,15756057	0,101380025	0,258940596
cfurn	1,034771333	0,186924109	0,648391536	1,870086979
cjewl	0	0,033328124	0,248208925	0,281537049
comnf	1,168298734	0,155929096	0,460414534	1,784642364
cwast	0	0,213845803	0,190094332	0,403940135
cirst	0	1,899301244	0,89509427	2,794395514
cnfme	0	1,009772627	0,558786146	1,568558772
cstrm	0,311197036	0,523223967	0,297636849	1,132057851
ctank	0	0,149041761	0,119984058	0,269025819
cofbm	1,799457272	1,048018915	0,820605696	3,668081883
cengt	0	0,015472326	0,009306654	0,02477898
cpump	1,146823045	0,144891313	0,105525648	1,397240006

cgear	0,286836687	0,114916774	0,088064738	0,489818198
clift	0,491631937	0,194237281	0,123662626	0,809531844
cgenm	0,659593394	0,171261641	0,112198519	0,943053553
cspcm	1,667232401	0,418155404	0,327476435	2,41286424
cdoma	0,349256467	0,082730363	0,343003256	0,774990086
coffm	0,343540818	0,207980968	0,297824027	0,849345814
celcm	0,65772499	0,835075167	0,676374104	2,169174261
crdtv	0	3,438005837	1,639679156	5,077684993
cmeda	1,995815904	0,171384552	0,44459059	2,611791046
cmtvp	1,325244703	2,287529704	6,157567623	9,770342031
cship	0	0,002021081	0,027789901	0,029810982
crail	0	0,021479192	0,007441969	0,028921161
cairc	0	0,002287783	0,00281651	0,005104293
coteq	0	0,040275486	0,093153687	0,133429173
ccnst	0,27423298	0,113085936	0,065820784	0,453139701
ccsrv	0,119745609	0,067995634	0,157267856	0,345009099
ctrad	2,398335896	18,64101989	11,66838782	32,7077436
cacco	0,231801518	0,337921977	1,148597642	1,718321137
ccats	0,380327459	0,224306997	1,707690571	2,312325027
cptrp	4,783531559	1,532792645	3,965069107	10,28139331
cftrp	0,118560138	5,116445415	4,310047069	9,545052622
ctrps	0	0,762342558	0,851782589	1,614125148
cpost	0,449621587	0,346004698	0,252118531	1,047744817
celcd	1,428098311	1,32906973	3,346898856	6,104066898
cwatd	0,305452097	0,517323522	1,285469126	2,108244746
cfins	2,860706379	4,221487669	7,181080078	14,26327413
cinsp	0,345584532	0,762208166	4,724510584	5,832303282
cofin	0	3,205827244	3,36234905	6,568176295
creal	4,568736056	3,571598847	11,3747289	19,51506381
crent	1,889860669	2,931817026	2,089810033	6,911487727
crsea	0,000868989	0,001408387	0,001263415	0,003540791
clacc	2,122265687	0,726802011	1,048630993	3,897698691
cobus	3,697289852	5,367686201	3,678038471	12,74301452
ctelc	7,611299451	2,59658158	3,791952961	13,99983399
csupp	4,522951012	1,821128973	3,639615167	9,983695152
cmnfs	0,063201229	0,135556921	0,094836042	0,293594192
cpuba	0	0,33976344	1,360006534	1,699769974
ceduc	0,753730038	0,43189686	2,033196356	3,218823253
cheal	4,326824447	1,065668666	4,875217867	10,26771098
cosrv	2,351053685	1,819440779	5,561550151	9,732044614
trc	0	22,14108742	13,81383685	35,95492427
flab-p	0,134782534	1,558095569	1,310791893	3,003669996
flab-m	0,370808273	3,037971342	2,282864684	5,691644298
flab-s	2,848950209	7,046104629	5,247084973	15,14213981

flab-t	25,6987958	17,06207562	12,91624917	55,67712058
fcap	1,294185408	30,37891593	26,73419156	58,4072929
ent	0	18,98190635	29,76156161	48,74346797
hhd-0	0	0,351437863	0,263967807	0,61540567
hhd-1	0	0,602145929	0,437960943	1,040106872
hhd-2	0	0,827313884	0,590677309	1,417991192
hhd-3	0	1,134009742	0,813134538	1,947144281
hhd-4	0	1,56996009	1,081578363	2,651538453
hhd-5	0	2,637952753	1,693183071	4,331135824
hhd-6	0	3,885785443	2,399455628	6,285241071
hhd-7	0	7,010367166	3,986489507	10,99685667
hhd-8	0	15,53508424	7,885345365	23,42042961
hhd-91	0	4,398573875	2,265323269	6,663897145
hhd-92	0	4,892948279	2,661266519	7,554214798
hhd-93	0	6,84190434	3,271130898	10,11303524
hhd-94	0	8,630572127	4,178255987	12,80882811
hhd-95	0	14,37275558	7,211956588	21,58471216
gov	0	4,394988033	14,92572065	19,32070869
atax	0,707382346	1,330441253	1,327901318	3,365724917
dtax	0	2,199048162	18,05583725	20,25488541
mtax	0	0,577627345	0,698560787	1,276188132
stax	0	7,429833726	7,098605174	14,5284389
s-i	0	6,375719296	11,07001221	17,4457315
dstk	0	0	0	0
row	0	30,29414853	19,51417392	49,80832245

Table 2: Impact of Business Enablement on Output

Business Enablement	***Direct***	***Indirect***	***Induced***	***Total effect***
aagri	0	0,291899933	1,987363893	2,279263826
afore	0	0,293630052	0,074440709	0,368070761
afish	0	0,016870418	0,078632562	0,095502981
acoal	0	0,462953529	0,49943149	0,962385019
agold	0	0,082896924	0,081382638	0,164279563
amore	0	0,362381958	0,344849195	0,707231153
aomin	0	0,554181414	0,596521447	1,150702861
afood	0	0,438632211	3,85775368	4,296385891
abevt	0	0,31394408	1,007931755	1,321875835
aweav	0	0,203415372	0,309405273	0,512820645
aknit	0	0,157118251	0,218318416	0,375436667
aleat	0	0,016904339	0,103851503	0,120755842
afoot	0	0,02443123	0,190785373	0,215216603
awood	0	0,598727417	0,403688356	1,002415773
apapr	0	2,577429785	-0,319159845	2,25826994
aprnt	0	1,914019173	0,072666546	1,986685719
apetr	0	1,778308933	0,924139282	2,702448215
abchm	0	0,787407153	1,107826067	1,89523322
aochm	0	0,98236905	1,839019262	2,821388312
arubb	0	0,100508727	0,180826444	0,281335171
aplas	0	0,763124184	-0,231450821	0,531673363
aglss	0	0,041561044	0,163443241	0,205004285
anmmi	0	0,429734822	0,192411603	0,622146425
abisc	0	0,59518165	0,456631995	1,051813645
anfme	0	0,196215962	0,18245499	0,378670953
afabm	0	0,966895437	0,313119455	1,280014892
amach	0	0,383797465	0,228349342	0,612146807
aemch	0	0,314277062	0,216923197	0,531200259
ardtv	0	0,154262206	0,328419161	0,482681368
amopt	0	0,018474477	0,083903019	0,102377495
amtvp	0	1,01238742	2,620185345	3,632572765

aotrp	0	0,009877949	0,017610393	0,027488341
afurn	0	0,15083193	0,267469301	0,418301231
aomnf	0	0,155866418	0,394397408	0,550263826
aelcg	0	1,119050672	1,9913315	3,110382172
awatd	0	0,735928459	0,327514026	1,063442485
acnst	0	2,955342317	1,841911989	4,797254306
awtrd	34,67072515	2,938403562	-32,08867618	5,520452525
artrd	27,8110765	2,360970434	-25,7085433	4,463503635
amtvs	10,05434233	1,327525604	-8,695692892	2,686175039
aacct	0,126768439	0,388089327	0,998117333	1,512975098
altrp	0	3,330940748	2,079827619	5,410768367
awtrp	0	0,04162173	0,023480833	0,065102564
aatrp	0	0,361547543	0,224458626	0,586006169
atrps	0	0,58495867	0,288527254	0,873485924
apost	0	3,280412045	2,010684713	5,291096758
afins	0	4,155399118	1,597736504	5,753135622
ainsp	0	1,022654772	1,907357875	2,930012647
aofin	0	3,001020201	0,11167568	3,112695881
areal	0	4,958349656	3,083717971	8,042067628
arent	0	0,634843111	0,156268894	0,791112005
acomp	0	0,612338234	1,147211078	1,759549312
arsea	0	0,001178617	0,003415135	0,004593752
aobus	0	5,15554687	10,06295837	15,21850524
apuba	0	0,057190394	0,779680572	0,836870966
aeduc	0	0,43601844	1,27740024	1,71341868
aheal	0	0,648840978	4,699952591	5,348793569
awast	0	0,00075424	0,002150847	0,002905087
amorg	0	0,017447718	0,062111004	0,079558722
arecr	0	0,269782197	65,65439481	65,92417701
aoact	0	0,020681987	0,076408821	0,097090808
anobs	12,09265913	3,247875058	-8,219088323	7,121445862
cagri	0	0,194552042	1,854370131	2,048922173
clani	0	0,182738337	0,666695531	0,849433868
cfore	0	0,347838278	0,08817243	0,436010708
cfish	0	0,0228303	0,106397351	0,129227651
ccoal	0	0,392740993	0,421464038	0,814205031
cmore	0	0,228611357	0,207839277	0,436450634
comin	0	1,77819237	1,964407371	3,742599741
celcg	0	0,19344933	0,2693513	0,46280063
cwatr	0	0,119489551	0,077053197	0,196542748
cmeat	0	0,079699275	1,101861702	1,181560978
cpfis	0	0,026122932	0,256420398	0,282543329

cvege	0	0,003869673	0,174085028	0,1779547
cfrui	0	0,042998589	0,348515404	0,391513993
cfats	0	0,038554987	0,391475242	0,430030229
cdair	0	0,059702505	0,593292385	0,65299489
cgrai	0	0,024349245	0,475272226	0,499621471
cstar	0	0,011044037	0,176085527	0,187129564
cafee	0	0,03189882	0,319925508	0,351824328
cbake	0	0,144202106	1,876753749	2,020955855
csuga	0	0,091526972	0,256235173	0,347762145
cconf	0	0,018183612	0,221729571	0,239913183
cpast	0	0,001228263	0,027434559	0,028662822
cofoo	0	0,206398449	0,50863116	0,715029609
calcb	0	0,07665939	1,340795376	1,417454766
csftd	0	0,307228318	0,468396626	0,775624944
ctoba	0	0,294969188	0,701048755	0,996017943
ctexf	0	0,219668772	0,304440882	0,524109655
ctexm	0	0,028942502	0,362927681	0,391870183
ccarp	0	0,010164139	0,042251934	0,052416073
cotex	0	0,117324248	0,051583291	0,168907539
cknit	0	0,016724842	0,187071338	0,20379618
cwear	0	0,484015607	0,530348139	1,014363746
cleat	0	0,051111591	0,305113141	0,356224731
cfoot	0	0,08573883	0,674572118	0,760310948
cwood	0	0,867703085	0,575196553	1,442899638
cpapp	0	4,050402429	-0,476285592	3,574116837
cprnt	0	3,478100597	0,027317723	3,50541832
cpetr	0	4,61923715	2,115847406	6,735084556
cbchm	0	1,231028227	1,799682028	3,030710255
cfert	0	0,154239806	0,552009699	0,706249504
cpain	0	0,617862845	1,425075038	2,042937883
cphar	0	0,11754943	0,766853789	0,884403219
csoap	0	0,196023742	0,899148819	1,095172561
coche	0	0,297431294	0,356476275	0,653907569
ctyre	0	0,151803063	0,22350625	0,375309313
corub	0	0,054969572	0,170605689	0,22557526
cplas	0	2,129015519	-0,850673857	1,278341662
cglas	0	0,096386255	0,383132046	0,479518301
ccera	0	0,171293639	0,058418623	0,229712261
cclay	0	0,153551842	0,106007452	0,259559294
ccmnt	0	0,155361342	0,158060247	0,313421589
cconc	0	0,287408719	0,054491736	0,341900454
conmp	0	0,123799141	0,035592195	0,159391336
cfurn	0	0,287680062	0,535093361	0,822773423

cjewl	0	0,030241405	0,101336373	0,131577778
comnf	0	0,12981705	0,381247796	0,511064846
cwast	0	0,080675209	0,109756558	0,190431767
cirst	0	0,814540801	0,606657072	1,421197873
cnfme	0	0,439746443	0,418765891	0,858512334
cstrm	0	0,430777731	0,079206012	0,509983743
ctank	0	0,369682894	-0,030270629	0,339412265
cofbm	0	0,793204485	0,469364839	1,262569325
cengt	0	0,007471199	0,003599255	0,011070454
cpump	0	0,068611441	0,086529503	0,155140943
cgear	0	0,046469464	0,390323038	0,436792502
clift	0	0,492348495	-0,344445006	0,147903489
cgenm	0	0,191673413	-0,047489239	0,144184174
cspcm	0	0,257939327	0,197044898	0,454984224
cdoma	0	0,031001987	0,277234228	0,308236215
coffm	0	0,06492889	0,246945861	0,31187475
celcm	0	0,677659685	0,27776559	0,955425275
crdtv	0	1,261123951	2,699590022	3,960713973
cmeda	0	0,083817021	0,414873974	0,498690995
cmtvp	0	2,570109074	6,673509012	9,243618086
cship	0	0,0008559	0,013300867	0,014156767
crail	0	0,008251435	0,003320166	0,011571601
cairc	0	0,000968845	0,001727255	0,0026961
coteq	0	0,019570396	0,042272833	0,061843229
ccnst	0	0,059002115	0,03855491	0,097557025
ccsrv	0	0,033947083	0,100897867	0,13484495
ctrad	0	92,00644211	-78,60088273	13,40555937
cacco	0	0,257927519	0,666260634	0,924188153
ccats	0	0,250035833	0,958428356	1,208464189
cptrp	0	1,70112157	1,11784935	2,81897092
cftrp	0	2,624397788	1,622161641	4,24655943
ctrps	0	0,508854816	0,243738761	0,752593577
cpost	0	0,551612325	0,340912672	0,892524997
celcd	0	1,031648256	1,894233279	2,925881535
cwatd	0	0,709959783	0,290210246	1,000170029
cfins	0	5,296717565	1,976526748	7,273244313
cinsp	0	0,919677158	1,973802785	2,893479943
cofin	0	3,114443037	0,11589471	3,230337747
creal	0	6,040355445	3,758968102	9,799323546
crent	0	3,360702525	0,617553194	3,978255718
crsea	0	0,000627288	0,007726322	0,00835361

clacc	0	0,57929292	4,088197393	4,667490313
cobus	0	5,108628541	9,564981018	14,67360956
ctelc	0	3,177116486	1,641652195	4,818768681
csupp	0	1,909729933	2,476008243	4,385738177
cmnfs	0	0,167193208	-0,030790771	0,136402437
cpuba	0	0,058577356	0,798646377	0,857223732
ceduc	0	0,358759387	1,127152566	1,485911953
cheal	0	0,590526764	5,137583656	5,72811042
cosrv	0	0,855597049	3,242522524	4,098119574
trc	0	8,102209313	7,54325436	15,64546367
flab-p	0	2,570364689	-1,030166342	1,540198347
flab-m	0	4,725521478	-1,83785993	2,887661548
flab-s	0	9,550344284	-1,817362071	7,732982213
flab-t	0	17,95033245	4,907320583	22,85765303
fcap	0	36,88114282	-3,414918054	33,46622477
ent	0	22,10312125	4,384229591	26,48735084
hhd-0	0	0,487688037	-0,16899539	0,318692648
hhd-1	0	0,773170017	-0,233859416	0,539310601
hhd-2	0	0,986787316	-0,251123906	0,73566341
hhd-3	0	1,328383956	-0,312863494	1,015520463
hhd-4	0	1,731834595	-0,359203192	1,372631403
hhd-5	0	2,6795162	-0,473673641	2,205842559
hhd-6	0	3,611002363	-0,436698075	3,174304288
hhd-7	0	5,737076928	-0,352774802	5,384302126
hhd-8	0	10,64326772	0,374318106	11,01758583
hhd-91	0	2,959474446	0,177236821	3,136711267
hhd-92	0	3,325886297	0,243899851	3,569786148
hhd-93	0	4,287155203	0,381216917	4,66837212
hhd-94	0	5,132399126	0,713419682	5,845818808
hhd-95	0	8,713196534	1,235752115	9,948948649
gov	0	5,117660555	4,766963434	9,884623988
atax	0	1,577308211	1,173840487	2,751148698
dtax	0	2,560639973	7,331124305	9,891764278
mtax	0	0,258634738	0,525773863	0,784408601
stax	0,046779091	2,442162762	4,191456623	6,680398476
s-i	0	7,424085551	1,969807878	9,393893429

dstk	0	0	0	0
row	0,097649366	12,97824101	12,53787215	25,61376253

Table 3: Impact of Tourist Experience on Output

Tourist Experience	***Direct***	***Indirect***	***Induced***	***Total effect***
	(million)	(million)	(million)	(million)
aagri	0	0,485375196	1,793888631	2,279263826
afore	0	0,228080448	0,139990313	0,368070761
afish	0	0,033512089	0,061990892	0,095502981
acoal	0	0,547614218	0,414770801	0,962385019
agold	0	0,113883238	0,050396325	0,164279563
amore	0	0,49110441	0,216126743	0,707231153
aomin	0	0,77577166	0,374931201	1,150702861
afood	0	1,201894312	3,094491579	4,296385891
abevt	0	0,258436451	1,063439384	1,321875835
aweav	0	0,245177114	0,267643531	0,512820645
aknit	0	0,097341115	0,278095552	0,375436667
aleat	0	0,069382887	0,051372955	0,120755842
afoot	0	0,119158985	0,096057617	0,215216603
awood	0	0,714092562	0,288323211	1,002415773
apapr	0	1,652942104	0,605327837	2,25826994
aprnt	0	1,558049291	0,428636428	1,986685719
apetr	0	1,495480238	1,206967977	2,702448215
abchm	0	1,297007071	0,598226149	1,89523322
aochm	0	1,651159355	1,170228958	2,821388312

arubb	0	0,127564239	0,153770932	0,281335171
aplas	0	0,288042044	0,24363132	0,531673363
aglss	0	0,121095412	0,083908873	0,205004285
anmmi	0	0,452806639	0,169339786	0,622146425
abisc	0	0,73425905	0,317554595	1,051813645
anfme	0	0,260934561	0,117736392	0,378670953
afabm	0	0,914430187	0,365584704	1,280014892
amach	0	0,400904948	0,211241859	0,612146807
aemch	0	0,371276777	0,159923482	0,531200259
ardtv	0	0,386888224	0,095793144	0,482681368
amopt	0	0,060102381	0,042275115	0,102377495
amtvp	0	2,493516346	1,139056419	3,632572765
aotrp	0	0,013937338	0,013551004	0,027488341
afurn	0	0,260064009	0,158237222	0,418301231
aomnf	0	0,208419332	0,341844494	0,550263826
aelcg	0	1,442274017	1,668108155	3,110382172
awatd	0	0,408430765	0,65501172	1,063442485
acnst	0	3,795697383	1,001556923	4,797254306
awtrd	0	3,214411777	2,306040748	5,520452525
artrd	0	2,596541609	1,866962026	4,463503635
amtvs	0	1,589968219	1,096206819	2,686175039
aacct	0	0,58236204	0,930613058	1,512975098
altrp	0	2,37877308	3,031995286	5,410768367
awtrp	0	0,034083044	0,03101952	0,065102564
aatrp	0	0,210539453	0,375466715	0,586006169
atrps	0	0,404631874	0,46885405	0,873485924
apost	0	3,589146603	1,701950154	5,291096758
afins	0	3,028909215	2,724226407	5,753135622
ainsp	0	0,742390428	2,18762222	2,930012647
aofin	0	1,572086704	1,540609176	3,112695881
areal	0	3,609549779	4,432517849	8,042067628
arent	0	0,584866623	0,206245383	0,791112005
acomp	0	1,528790851	0,230758461	1,759549312
arsea	0	0,004042077	0,000551674	0,004593752
aobus	0	12,50286	2,715645233	15,21850524
apuba	0	0,20835978	0,628511186	0,836870966
aeduc	0	0,619122537	1,094296142	1,71341868
aheal	0	3,262843962	2,085949607	5,348793569
awast	0	0,001079472	0,001825614	0,002905087
amorg	0	0,028663247	0,050895475	0,079558722
arecr	0	65,452497	0,471680008	65,92417701
aoact	0	0,034935026	0,062155781	0,097090808
anobs	0,0	3,339623229	3,781822633	7,121445862
cagri	0,093834076	0,298514637	1,65657346	2,048922173
clani	0	0,228518561	0,620915307	0,849433868

cfore	0	0,270176663	0,165834045	0,436010708
cfish	0,022642841	0,022689159	0,083895652	0,129227651
ccoal	0,019299622	0,405031739	0,389873669	0,814205031
cmore	0	0,304784912	0,131665722	0,436450634
comin	0,949720687	1,620021766	1,172857288	3,742599741
celcg	0	0,270041632	0,192758998	0,46280063
cwatr	0	0,071398481	0,125144266	0,196542748
cmeat	0,137490111	0,082828896	0,961241971	1,181560978
cpfis	0	0,044601082	0,237942247	0,282543329
cvege	0,032050775	0,005006685	0,14089724	0,1779547
cfrui	0,032152445	0,05269177	0,306669778	0,391513993
cfats	0,056169521	0,066788666	0,307072042	0,430030229
cdair	0,028286284	0,049800707	0,5749079	0,65299489
cgrai	0,011135769	0,036938661	0,451547041	0,499621471
cstar	0	0,010033941	0,177095623	0,187129564
cafee	0	0,039123352	0,312700976	0,351824328
cbake	0,782127248	0,212990922	1,025837686	2,020955855
csuga	0,024512029	0,059933487	0,263316628	0,347762145
cconf	0,029213158	0,021783482	0,188916543	0,239913183
cpast	0	0,001877862	0,02678496	0,028662822
cofoo	0,1162559	0,109195757	0,489577951	0,715029609
calcb	0,004982273	0,057886547	1,354585946	1,417454766
csftd	0,094105393	0,160978307	0,520541243	0,775624944
ctoba	0,081399179	0,154605065	0,760013699	0,996017943
ctexf	0,046574281	0,199549074	0,2779863	0,524109655
ctexm	0,125903912	0,028536414	0,237429858	0,391870183
ccarp	0	0,017993023	0,03442305	0,052416073
cotex	0	0,084495056	0,084412482	0,168907539
cknit	0,160221063	0,015094148	0,02848097	0,20379618
cwear	0,090494222	0,069133279	0,854736245	1,014363746
cleat	0,098763639	0,124286228	0,133174864	0,356224731
cfoot	0,35751883	0,063812431	0,338979687	0,760310948
cwood	0,459148614	0,571157908	0,412593116	1,442899638
cpapp	0,963237572	1,669447162	0,941432104	3,574116837
cprnt	1,572954852	1,178945246	0,753518221	3,50541832
cpetr	1,220418747	2,378473687	3,136192122	6,735084556
cbchm	0,706930746	1,417796366	0,905983143	3,030710255
cfert	0,228986863	0,1747824	0,302480241	0,706249504
cpain	1,280653755	0,496246442	0,266037686	2,042937883
cphar	0	0,193949195	0,690454024	0,884403219
csoap	0,285467528	0,077545165	0,732159868	1,095172561
coche	0,260528121	0,238649446	0,154730003	0,653907569
ctyre	0,00626891	0,104832351	0,264208052	0,375309313
corub	0,082677886	0,082434215	0,06046316	0,22557526
cplas	0,026197854	0,650181498	0,60196231	1,278341662

cglas	0,156287346	0,126026233	0,197204721	0,479518301
ccera	0,093426131	0,059318065	0,076968065	0,229712261
cclay	0	0,194296934	0,06526236	0,259559294
ccmnt	0,092709495	0,14165099	0,079061104	0,313421589
cconc	0	0,254431693	0,087468761	0,341900454
conmp	0	0,110891178	0,048500158	0,159391336
cfurn	0,387570188	0,122926125	0,31227711	0,822773423
cjewl	0	0,014279544	0,117298233	0,131577778
comnf	0,181446886	0,108831732	0,220786228	0,511064846
cwast	0	0,098819457	0,09161231	0,190431767
cirst	0,02060277	0,973513989	0,427081114	1,421197873
cnfme	0	0,592541641	0,265970692	0,858512334
cstrm	0	0,367459571	0,142524172	0,509983743
ctank	0,211501232	0,070153971	0,057757062	0,339412265
cofbm	0,278963534	0,59052477	0,393081021	1,262569325
cengt	0	0,0066191	0,004451354	0,011070454
cpump	0	0,10497139	0,050169553	0,155140943
cgear	0,318674988	0,076207395	0,041910119	0,436792502
clift	0	0,088384683	0,059518806	0,147903489
cgenm	0	0,090665033	0,053519141	0,144184174
cspcm	0,045644229	0,252583224	0,156756772	0,454984224
cdoma	0,101761738	0,040920417	0,16555406	0,308236215
coffm	0,089440952	0,080938907	0,141494892	0,31187475
celcm	0,137122468	0,494480256	0,323822551	0,955425275
crdtv	1,762540621	1,413912031	0,784261321	3,960713973
cmeda	0,141709702	0,146926696	0,210054596	0,498690995
cmtvp	4,587907833	1,752945976	2,902764276	9,243618086
cship	0	0,001207636	0,012949131	0,014156767
crail	0	0,008014187	0,003557414	0,011571601
cairc	0	0,001366996	0,001329104	0,0026961
coteq	0,005248825	0,012618898	0,043975507	0,061843229
ccnst	0	0,066011961	0,031545064	0,097557025
ccsrv	0,023107013	0,036988277	0,074749659	0,13484495
ctrad	0	7,794048166	5,611511207	13,40555937
cacco	0,223129756	0,160361301	0,540697096	0,924188153
ccats	0,244856013	0,146878187	0,816729988	1,208464189
cptrp	0	0,876756918	1,942214002	2,81897092
cftrp	0,046226422	2,108056059	2,092276949	4,24655943
ctrps	0	0,345508014	0,407085563	0,752593577
cpost	0,586299175	0,185528697	0,120697125	0,892524997
celcd	0,57262113	0,74421329	1,609047115	2,925881535
cwatd	0,12247639	0,263013309	0,61468033	1,000170029
cfins	1,382230656	2,478867223	3,412146434	7,273244313
cinsp	0,271744634	0,395496297	2,226239012	2,893479943
cofin	0	1,63150168	1,598836066	3,230337747

creal	2,460439616	1,935948596	5,402935335	9,799323546
crent	1,593339282	1,380679818	1,004236619	3,978255718
crsea	0,006985805	0,000765869	0,000601936	0,00835361
clacc	3,756149108	0,4149058	0,496435405	4,667490313
cobus	10,32648592	2,590915134	1,756208503	14,67360956
ctelc	1,352148983	1,652215196	1,814404502	4,818768681
csupp	1,759210314	0,897116525	1,729411338	4,385738177
cmnfs	0,024130765	0,067050246	0,045221426	0,136402437
cpuba	0	0,213033672	0,64419006	0,857223732
ceduc	0,245817936	0,272847481	0,967246536	1,485911953
cheal	2,546688615	0,854377725	2,32704408	5,72811042
cosrv	0,523632884	0,941506735	2,632979955	4,098119574
trc	0	9,000406891	6,645056782	15,64546367
flab-p	0,19638527	0,714436011	0,629377066	1,540198347
flab-m	0,339267269	1,452267024	1,096127256	2,887661548
flab-s	1,5519255	3,667298157	2,513758556	7,732982213
flab-t	7,423613255	9,258759571	6,175280204	22,85765303
fcap	6,854536209	13,80369261	12,80799595	33,46622477
ent	0	12,38061789	14,10673296	26,48735084
hhd-0	0	0,192091376	0,126601272	0,318692648
hhd-1	0	0,329384289	0,209926312	0,539310601
hhd-2	0	0,45278546	0,282877951	0,73566341
hhd-3	0	0,626227933	0,38929253	1,015520463
hhd-4	0	0,854912125	0,517719278	1,372631403
hhd-5	0	1,395478425	0,810364135	2,205842559
hhd-6	0	2,026631756	1,147672532	3,174304288
hhd-7	0	3,478619662	1,905682464	5,384302126
hhd-8	0	7,251082101	3,766503725	11,01758583
hhd-91	0	2,054925871	1,081785396	3,136711267
hhd-92	0	2,300017164	1,269768984	3,569786148
hhd-93	0	3,106049479	1,562322641	4,66837212
hhd-94	0	3,852425671	1,993393137	5,845818808
hhd-95	0	6,508431679	3,44051697	9,948948649
gov	0	2,866554414	7,018069574	9,884623988
atax	1,465668437	0,652533175	0,632947086	2,751148698
dtax	0	1,434290872	8,457473406	9,891764278
mtax	0	0,449227712	0,335180889	0,784408601
stax	0	3,275518043	3,404880433	6,680398476
s-i	0	4,158451891	5,235441538	9,393893429
dstk	0	0	0	0
row	0	16,26869247	9,345070063	25,61376253