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A graphic illustration on the left side of the cover. It features three interlocking gears: a blue gear at the top left, a red gear in the middle, and a larger light blue gear at the bottom. The light blue gear is partially enclosed by a brown outline of a human head in profile, facing right. The background is a solid orange color with several overlapping, semi-transparent yellow squares at the bottom.

Structural Transformation and Jobs in Timor-Leste



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Executive Summary

Structural transformation is described as the reallocation of economic activity across broad economic sectors such as agriculture, industry and services. A key feature of structural transformation is an increase in the share of employment in industry and services with concurrent reduction of workers in the agriculture sector. Typically, a large segment of the labour force in low-income countries is engaged in subsistence agriculture.

The movement of labour from agriculture to industry and services usually coincides with an improvement in labour productivity. With greater productivity, value added is enhanced leading to higher returns for the investors, and at the same time labour is able to command higher wages. Such productivity shifts in the economy are crucial for unleashing growth and broad-based economic development.

Many developed countries have taken this well-trodden path to industrialization. Western Europe and USA began industrializing in the 19th Century. The emergence of Japan after World War II, and subsequent growth in East Asia, Southeast Asia, and more recently in China showed that, although policy measures differed, there are several common threads that explain their economic success.

These include relatively open trade regime, prudent macroeconomic framework, investments in human development, and harnessing dynamic comparative advantage to produce goods and services for exports and subsequently for the domestic market. The experience from industrialized and emerging economies in Asia also shows that economic development can, in fact, be fast tracked and it is possible for

developing countries to achieve higher levels of welfare in a relatively short period of time.

Timor-Leste is at an early stage of its nascent structural transformation. Between 2010 and 2013, significantly larger number of jobs were added in the non-agricultural sectors (36,560) compared to the agriculture sector (12,070). In wholesale and retail trade alone 16,553 jobs were added. The employment share of agriculture has more or less remained unchanged.

However, the number of subsistence food producers decreased from 206,300 in 2010 to 178,900 in 2013. Although subsistence food producers are not classified as employed or counted in the labour force, the decrease of subsistence workers and an increase in the number of non-agricultural jobs does indicate a positive trend in the labour market.

Overall though, the economy of Timor-Leste is not creating enough productive jobs to absorb the increasing number of entrants in the labour force. As a result, unemployment in the country increased from 7.8 percent in 2010 to 11 percent in 2013. A striking feature of the labour market in Timor-Leste is the low rate of labour participation.

Only 30.6 percent of the working-age population is in the labour force which is much lower than the average of 75 percent for least developed countries¹. At 21.3 percent, female labour force participation rate is one of the lowest in the world. Moreover, close to a quarter of the youth, are, economically speaking, idle i.e. they are neither in the labour force nor studying.

¹ In 2013 a revised methodology for measuring labour force and employment was adopted by the 19th International Statisticians Conference. A majority of subsistence foodstuff producers are no longer counted in the labour force. However, even using the old methodology, labour force participation rate in Timor-Leste is still less than 50 percent.

Economic incentive is a key factor that attracts people to join the labour market. A small private sector in Timor-Leste has meant that not enough productive jobs are on offer for those in the labour force as well as to incentivise those who, at the present, are not seeking employment. Besides lack of job opportunities, there are several proximate factors that affect the participation of working-age population in the labour market.

Generally, young people find it difficult to make the “school-to-work” transition. Low level of education and skills may be limiting job opportunities for young Timorese. Moreover, women face several social and cultural barriers which affect their chances of joining the labour force and/or finding employment.

As Timor-Leste moves forward on the path towards structural transformation, it is confronted by a world which is quite different from the one that East Asia faced in the sixties and early seventies. Lower production costs and skilled human capital meant that East Asia had competitive advantage in low-end manufacturing.

At the moment, Timor-Leste does not seem to have this “Asian” competitive advantage. And, in light of other emerging economies that are following in the footsteps of the Asian Tigers, it is all the more challenging for Timor-Leste.

While Timor-Leste does face several challenges to expand its industrial base, create jobs and stimulate labour participation, these problems are not necessarily intractable. As this paper argues, enlightened public policies can address these challenges and pave the way for inclusive growth. In this regard, Timor-Leste should find niche product markets to stimulate local manufacturing as part of an employment-friendly industrial policy.

A conventional “supply side” approach to improve the business environment on its own may not be sufficient to attract direct investment which Timor-Leste needs for job creation. The state has to play a more active role in attracting and directing investment and technical know-how to a selected number of sub-sectors that offer the best possible outcomes in terms of jobs and products for the local market.

Admittedly, the domestic market is relatively small, but it will take time for local businesses to grow and meet the demands of an export market. To speed up learning, this paper recommends incubators in the form of joint ventures involving domestic and foreign firms for transfer of knowledge and technology.

Furthermore, Timor-Leste should implement a suite of well-targeted active labour market programmes to build human capital. A dedicated funding facility HCDF (Human Development Capital Fund) has already been set up to finance education and training. However, funding should be realigned to finance skills development in priority sectors, occupations, and entrepreneurship that Timor-Leste needs to industrialize.

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BAS	Business Activity Survey
ESS	Enterprise and Skills Survey
HCDF	Human Capital Development Fund
GDP	Gross Domestic Product
GDS	General Directorate of Statistics
GoTL	Government of Timor-Leste
ILO	International Labour Organisation
IMF	International Monetary Fund
LDCs	Least Developed Countries
LFS	Labour Force Survey
LFPR	Labour Force Participation Rate
MoF	Ministry of Finance
NEET	Not in employment, education, and training
SEPFPOPE	Secretary of State for Vocational Training and Employment Policy
USA	United States of America
USD	United States Dollar

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1. Introduction

In a market economy, private sector is the engine of job creation and thus private sector investment is necessary for growth. However, growth alone is not sufficient to ensure that benefits are broadly shared among the population. The crucial link between growth and economic development is employment.

Lack of good jobs is one of the primary causes of income poverty (Portes and Benton, 1984). Securing productive employment is a pathway to enhance welfare and avoiding the poverty trap in developing countries (Amsden, 2010). The question, therefore, is what are the forces that drive productive employment?

The shift from low productivity to higher productivity coincides with structural transformation of the economy. Structural transformation is described as the reallocation of economic activity across broad economic sectors such as agriculture, industry and services (IMF, 2013). An important part of this process is the movement of labour from less productive to more productive sectors of the economy.

In pre-industrial economies, typically, a large number of workers are concentrated in the agriculture sector, often producing at subsistence levels. The movement of labour from low productive subsistence agriculture to industry and services increases overall productivity. With greater productivity, value added is enhanced with higher returns for investors, and at the same time labour is able to command better wages, thus unleashing economic development.

This paper takes a closer look at the economy of Timor-Leste and examines the current labour market situation. In particular, the paper explores the ongoing structural changes in the economy in the context of job growth, shifts in the sector share of employment, and labour participation.

The country has set itself an ambitious task to become a middle-income country by 2030 (GoTL, 2011). The government regards job creation as a priority and has called for the development of the private sector, coupled with public investment in infrastructure and human capital (GoTL, 2011).

However, results show that the underlying problems facing the economy and the labour market are quite complex. The early stages of structural transformation along with some unique features of the labour market in Timor-Leste require a careful study to charter a course that ensures that future growth is job-rich.

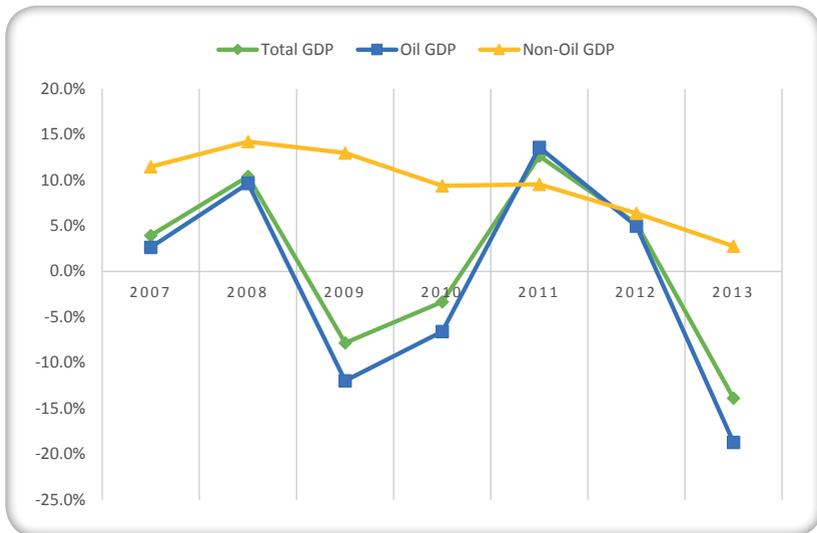
The analysis draws from various national surveys as well as literature reviews. Data sources include national accounts, trade statistics, and budget books for macroeconomic overview. Employment and labour data were taken from the Labour Force Surveys (LFS) from 2010 and 2013, Business Activity Surveys (BAS), and the Enterprise and Skills Surveys (ESS). In addition to this, an extant literature review was carried out to understand the theoretical underpinnings of structural transformation, productivity, and economic development.

2. Economy

Since the restoration of independence in 2002, Timor-Leste has made notable progress. Between 2006 and 2013, the average growth rate of non-oil gross domestic product (GDP) was 9.45 percent (MoF, 2013). The pace of growth, however, in the non-oil sector has slowed considerably (Figure 1). In 2013, the non-oil economy GDP increased by only 2.8 percent.

In the budget analysis for 2016, Ministry of Finance (MoF) estimated a GDP growth rate of 5.1 percent in 2015 which was expected to increase to 7.5 percent by 2018. The projected growth is assumed to be driven by an increase in capital spending, private investment, and household consumption.

Figure 1. GDP growth rate 2007-2013 (percent)

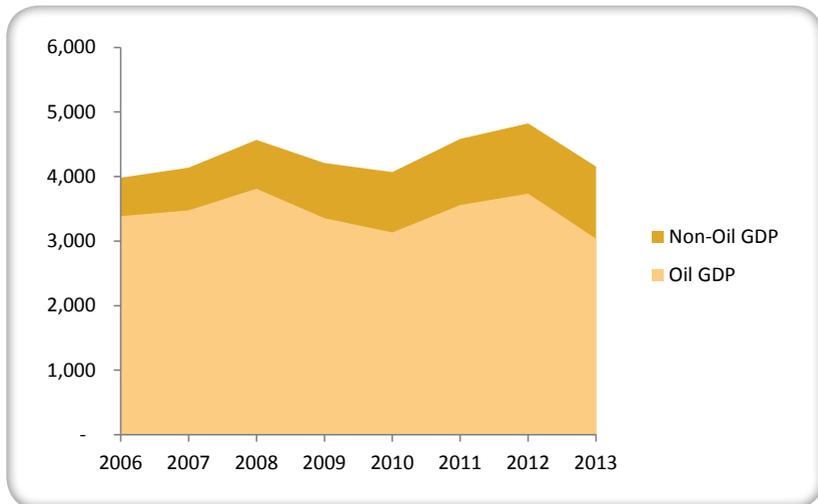


Source: Calculations made using data from the national accounts, General Directorate of Statistics, Ministry of Finance, 2015

Timor-Leste remains predominately an oil-based economy. Oil accounted for almost 72 percent of the total GDP in 2012 (Figure 2). The oil income financed close to USD1.4 billion or almost 90 percent of the government budget in 2015 (MoF, 2015).

However, in recent years, the share of the oil industry in the economy decreased slightly as other sectors have started to grow. In 2006 output from the oil sector accounted for over 85 percent of the GDP, but since then its share has gradually dropped.

Figure 2. Share of oil in the economy in million USD



Source: Calculations made using data from the national accounts, General Directorate of Statistics, Ministry of Finance, 2015

Both private and public consumption expenditure has also increased. But, public investments was much higher, averaging well above 40 percent of GDP between 2011 and 2013. On the other hand, private investment as a percentage of GDP averaged only 6 percent between 2007 and 2012 (ADB, 2015). An expansionary fiscal policy helped to stimulate growth in Timor-Leste.

In terms of production, it appears that only construction sector has responded to the fiscal stimulus while other industrial sectors such as manufacturing has remained stagnant. The country produces very little in finished products. Most of the consumable and durable products are imported.

In 2013, Timor-Leste's non-oil imports in nominal terms amounted to over USD 1.26 billion while its non-oil exports amounted to a little over USD 100 million. The exports included USD 43 million in travel receipts while merchandise exports totalled USD 22 million (MoF, 2013). The latter mainly included coffee which, after oil, is the only major export of Timor-Leste.

Interestingly, the largest expansion was seen in public administration, which in 2012, contributed 20.7 percent to the non-oil GDP compared to 9.3 percent in 2000 (Figure 3). Apart from public administration, construction is the largest contributor (19.9 percent) in the non-oil GDP of Timor-Leste.

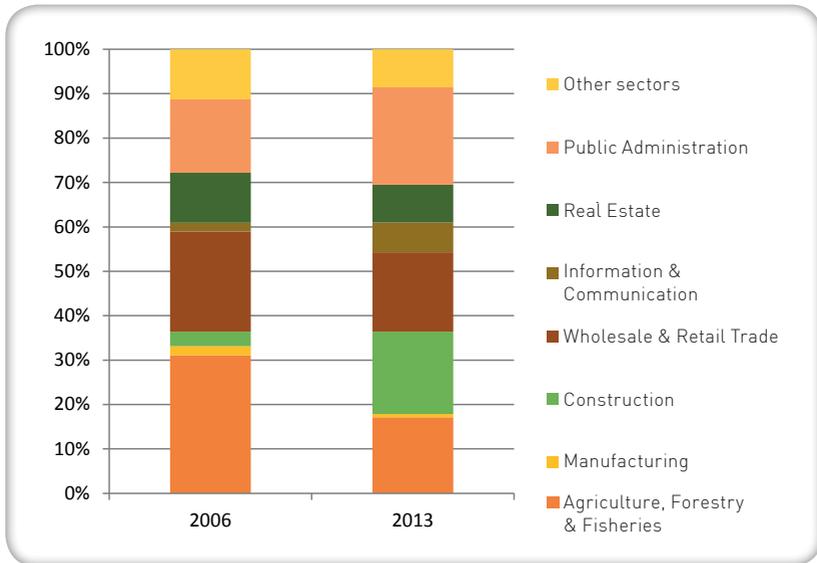
The construction industry has grown significantly since 2006 when its share in the non-oil GDP was only 3.5 percent. Wholesale and retail trade is also one of the major contributors (18.8 percent) in the total non-oil GDP.

The share of information and communication in GDP increased as well, albeit slower than construction, from 0.6 percent in 2000 to 6.5 percent in 2012. On the other hand, the manufacturing sector shrunk in both proportional and absolute terms. For example, the share of manufacturing in 2012 was only USD 8 million, declining from USD 14 million in 2000.

The proportion of agriculture in the non-oil GDP declined as compared to other sectors. In 2000 the value-added in agriculture was USD 155 million, while in 2011 the output had increased to just USD 156 million.

In 2012, agricultural output increased to USD 179 million, a sharp increase which possibly resulted from favourable weather. In 2009 agricultural output reached USD 191 million, but the years before and after saw erratic growth in this sector.

Figure 3. Value added to non-oil GDP by sectors in percent terms (2000-2013, Constant USD)



Source: Calculations made using data from the national accounts, General Directorate of Statistics, Ministry of Finance, 2015

3. Labour and employment

Before we look into the labour market situation in Timor-Leste, it is useful to explain the methodological changes in the calculation of labour and employment. A revised methodology for measuring work and employment was adopted at the 19th International Statisticians Conference in Geneva in 2013.

According to the revised framework, work comprises any activity performed by persons of any sex and age to produce goods or to provide services for use by others or for own use (ILO, 2013). The revised definition of employment excludes foodstuff producers who mainly consume the food that they produce.

In the case of Timor-Leste where a lot of farmers are working at a subsistence level, it meant that a total of 178,900 subsistence foodstuff producers were not counted in the labour force (Mehran, 2016)².

In 2013 Timor-Leste had a working-age population of 696,255³. More than 68,000 people were added to the working-age population between 2010 and 2013. Among the working-age population, a total of 213,223 persons were in the labour force which included employed and unemployed. Only those who are actively looking for employment in the reference week, but are unable to find work are classified as unemployed.

² Besides the Labour Force Survey Report 2013, data from the “Main trends based on harmonized data, 2016” report has been used which includes comparison between LFS 2010 and 2013 based on the revised methodology.

³ A broader definition of working-age was used in Timor-Leste which includes anyone above 15 years old. Core working-age population is 15-64.

Between 2010 and 2013, approximately 50,700 jobs were added to the economy, but the labour force increased by 62,300, which meant that an additional 11,600 persons were left without a job. As a result, the unemployment rate during this period rose from 7.8 percent to 11 percent, an increase of 3.2 percentage points.

The unemployment rate among youth was close to 22 percent, double the average national unemployment rate (11 percent). Overall, more than one quarter of unemployed, or 6,204 persons, were youth. To put this into perspective, the youth are twice at risk of unemployment compared to the general population (GDS & SEPFOP, 2013).

Table 1. Key Labour Force Indicators, Timor-Leste, 2013

Working-age population	696,256
Labour force	213,223
Labour force participation rate (%)	30.6
Employment	189,787
Employment-to-population ratio (%)	27.3
Unemployment	23,436
Unemployment rate (%)	11
Time-related underemployed	1,400
Time-related underemployment as a share of labour force (%)	0.7
Youth unemployment	6,204
Youth unemployment rate (%)	21.9
Youth NEET share of youth population (%)	24.3
Subsistence foodstuff producers	178,900

Source: GDS & SEPFOP, LFS Data 2013

The rise in the unemployment rate should, however, be seen in a broader context. First of all the number of people who were in the labour force increased in absolute terms as well as the proportion of the working-age population. Naturally, with more people in the labour force competing for jobs, unemployment rate can increase if the number of available jobs are limited.

Secondly, it is not unusual to see an increase in the unemployment rate and informal employment in developing countries in the early stages of structural transformation.

The seemingly puzzling phenomenon of improved job market and higher unemployment was first formally studied in Nairobi, Kenya (Harris & Todaro, 1970). The study found that with the growth in the modern sectors in Nairobi, more and more people from the countryside who were previously involved in subsistence agriculture started moving to the city. However, there were not enough jobs to immediately absorb all the job-seekers.

The arrival of more job-seekers in Nairobi exerted additional pressure on the labour market. Those who were not able to find employment contributed to a rise in the unemployment rate. While those who did not wait to find a job started their own enterprises which led to an increase in the informal sector. The findings from this research provided the underpinnings of what later came to be known as the Harris-Todaro model.

Clearly, there is evidence in Timor-Leste that more jobs have been added in the non-agricultural sectors. Several enterprise surveys capture that trend from 2010 to 2014. According to BAS 2013, between 2010 and 2013, non-agricultural enterprises added a total 12,600 employees. The total number of workers, possibly owing to the economic slowdown, decreased in 2013 to 59,000 from 61,500 in 2012.

The upward trend of job creation in the non-agriculture sector is further corroborated by the ESS 2014 which showed that in the surveyed firms there was a 13 percent increase in the number of workers from 4,957 in 2011 to 5,641.

BAS 2013 showed that more than 81 percent of employees worked for firms domiciled in Dili. The recent growth and concentration of non-agricultural jobs is mainly limited to Dili which also has the highest number of unemployed people in the country.

4. Inter-sector labour movement

Preliminary results from Census 2015 were released in October 2015. The data show that 28.1 percent of the population was living in the urban areas. In 2010, close to 30 percent of the population was urban.

Between 2004 and 2010 there was a rapid increase in urban population with an average annual increase of 4.8 percent compared to the overall average of 2.4 percent. The situation seems to have reversed between 2010 and 2015 with rural population increasing by 2.3 percent annually, while urban population increasing a mere 0.8 percent annually.

On the other hand, data from LFS 2013 suggest that, consistent with the past trend (2004-2010), urban population growth had continued in the period between 2010 and 2013. On average, the urban population increased by 4.8 percent annually while the rural population in this period grew 1.9 percent annually.

As the full Census 2015 report has not been released yet, for current analysis, working-age population figures in urban and rural area are taken from the labour force surveys.

The capital city of Timor-Leste, Dili, reported a total of 45 percent increase in the total working-age population from

2010-2013. Since 2009, around 22 percent of the total working-age population living in Dili were migrants. Close to 39 percent of the working-age population moved to Dili for economic and educational reasons. Overall, urban areas such as Dili are witnessing greater economic activity. While 39.4 percent of the working-age population in urban areas is in the labour force, the comparable figure for rural areas is only 26.6 percent.

As discussed, job creation outside agriculture is happening mainly in Dili. The city is acting like a magnet for job-seekers which is putting more pressure on the labour market. A larger proportion of people are seeking work in the capital, but not everyone is able to find jobs.

It is not surprising, therefore, that while unemployment rate in Dili is slightly higher (13.4 percent) than the national average, more than 42 percent (10,014 from 23,436) of the total unemployed in Timor-Leste are living in Dili.

In early stages of economic development, we often see a dual-sector economy (Lewis, 1954). Typically, in early stages of structural changes in the economy a large number of workers are engaged in agriculture at or near subsistence level.

In the non-agricultural sector which Lewis has collectively described as the modern sector a small number of workers are employed but the number of employees increase as the modern sector starts to grow.

Lewis strongly argued that it was not that workers in developing countries did not work hard, but their productivity was low due to the large number of people engaged in subsistence work. Low capital-to-labour ratio meant that marginal product of labour was either zero or even negative.

Moreover, social norms sometimes dictate that people are employed at subsistence level even when there is no economic benefit for the employers (Lewis, 1954).

We now explore whether such duality of economy exists in Timor-Leste. Due to limited time-series data on labour force and employment as well as the methodological changes including the revised definition of subsistence foodstuff producers limits the scope of the analysis. To see a general trend over a longer period, data on the share of workers employment is used from the Census 2004 and 2010 and LFS 2010 and 2013.

Overall, the data suggest a general decline in the proportion of agricultural workers from 2004 to 2013. According to 2004 Census, 76 percent of workers were in agriculture employment. The percentage of agricultural workers had declined to 66.5 percent by 2010 Census. The 2010 LFS showed that close to 51 percent employed were involved in agriculture.

However, if the number of subsistence foodstuff producers are excluded only 26.2 percent of the employed were working in the agriculture sector. In absolute terms the number of workers engaged in agriculture increased from 36,537 in 2010 to 48,607 in 2013. But, the proportion of employed in the agriculture sector slightly dropped to 25.6 percent in 2013.

The proportional decrease of workers in agriculture is almost negligible, but there was a significant reduction in the number of subsistence foodstuff producers from 206,300 in 2010 to 178,900 in 2013. It is possible that some who are no longer involved in subsistence production may have started producing at above subsistence and as a result are now considered as part of the labour force.

Some may have altogether stopped working, or those who are no longer working for own production were actively looking

for employment. With the limitation of data, it is not possible to track the movement of subsistence foodstuff producers. However, it is clear that significantly more jobs were added to the non-agricultural sectors (36,560) compared to the agriculture sector (12,070).

In wholesale and retail trade alone 16,553 jobs were added between 2010 and 2013. Although subsistence food producers are not classified as employed or counted in the labour force, the decrease of subsistence workers and an increase in the number of non-agricultural jobs does suggest a positive trend in the labour market.

Notwithstanding the difficulty of tracking workers, especially those involved in subsistence food production, the overall trend in Timor-Leste is consistent with global experience of outward labour movement from agriculture and subsistence food production.

Globally, evidence shows that as the economy starts to diversify, the share of employed in the agriculture sector starts to decrease. While the number of agricultural workers decreases, this does not appear to reduce total output. Instead, in almost all the cases agricultural production increases.

The vast number of agricultural workers in developing countries have thus been characterized as “surplus labour” (Lewis, 1954). Once agriculture starts to shed the excess workers, productivity per employed person in the sector improves.

In the next section, we take a closer look at employment in non-agricultural sectors of the economy. The growth of industry and services which forms the core of a modern sector and comparative productivity with agriculture are discussed.

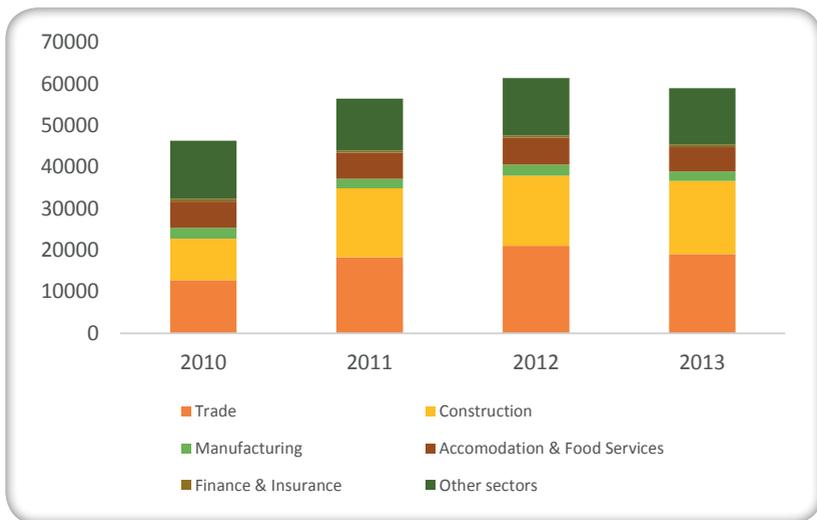
5. Structural transformation and productivity gains

In pre-industrialized economies, the concentration of labour or the so called labour surplus in agriculture means that the marginal product of labour is quite low. Labour and capital are the key inputs in the production of goods. In the case of developing countries, farmers tend to work on small plots of land (capital).

With large families, land gets further divided when children grow up. In other words, increasingly farmers end up working on smaller land plots with lower marginal returns on labour.

BAS 2013 shows the number of non-agriculture employees from 2010 to 2013 (MoF, 2014). The number of workers increased in 2011 and 2012, but there was a slight decline in 2013 (Figure 4).

Figure 4. Aggregate workers in non-agriculture sectors 2010-2013.



Source: Business Activity Survey, Ministry of Finance, 2014

Overall though there was a net increase of 12,600 employees between 2010 and 2013. A larger proportion of jobs were created in the construction sector. A total of 7,600 new employees were added to this sector while the number of workers in trade increased from 12,800 in 2010 to 19,100 making it the largest employer outside agriculture and public administration.

On the other hand, fewer workers were employed in the manufacturing sector. The number of jobs in manufacturing fell from 2,600 in 2010 to 2,300 in 2013. In real terms the value added in the manufacturing has also declined from USD 14 million in 2000 to USD 8 million in 2013, a significant decline which is also somewhat surprising.

Not much is being produced in Timor-Leste, but the manufacturing situation in 2013 was probably better compared to 2000. Of late there are more consumable products in the market produced in Timor-Leste such as condiments, furniture, bottled water, to name a few.

Irrespective of this slight inconsistency in data and what one can observe, the lack of job growth in the manufacturing is a concern. In several developed and rapidly developing countries in Asia, job creation in manufacturing in fact led the structural transformation process.

In the past, lower costs made manufacturing of consumer goods cheaper to produce in developing countries. To realize gains from competitive advantage, many multinational companies set up their manufacturing plants in emerging economies.

In East and Southeast Asia, this process was much more conspicuous and appeared to follow a distinct pattern. Countries moved up the manufacturing value chain and in the process others in the region stepped in to take over low-end manufacturing.

This pattern has been described as the “flying geese paradigm”: Japan was seen as the leader while other fast growing economies in East Asia such as South Korea, Taiwan, Hong Kong- the so called Asian Tigers- followed behind Japan in gaining dynamic comparative advantage. As these countries became industrialized, others took over low-end manufacturing such as Indonesia, Viet Nam etc.

The importance of modern sectors such as manufacturing, trade, and services in an economy can be best understood by its higher productivity. To see this in the case of Timor-Leste, the productivity in the so called modern sectors is compared with agriculture. This is measured in terms of GDP per worker employed. The data on production (nominal) is taken from the National Accounts 2013 while the data on employees comes from LFS 2013.

According to the 2013 LFS, there were 48,607 persons engaged in the agriculture sector (Mehran, 2016). Technically, subsistence foodstuff workers should be included because, although they are not considered employed, they are contributing to the national GDP. Anyway, we will look at labour productivity in agriculture with and without subsistence foodstuff producers.

In 2013, the output per employed person in construction and trade was USD 18,754 and USD 15,837 respectively. Interestingly, output per employed worker in manufacturing was only USD 1,054. Generally, output in the manufacturing sector is higher than trade and services.

In agriculture, the output per worker was only USD 836 based on the combined total of those who are employed in agriculture as well as those who are involved in subsistence food production. If we exclude the subsistence foodstuff producers, productivity per person increases to USD 3,909, which is considerably higher, but still less than one fifth of the output in the construction sector.

In conclusion, the findings show that Timor-Leste is witnessing early structural changes in the economy. Clearly, job creation in the non-agricultural sector which we have termed as modern is gaining momentum.

There are also productivity gains in the modern sector which we have seen comparing labour productivity in agriculture and the non-agriculture sectors. These are positive developments, but a unique feature of the labour market is the low rate of labour force participation which is explored in the next section.

6. Curious case of low labour force participation

In the neoclassical labour model, labour supply is determined by the choice a person makes between leisure and work. It is assumed that work and leisure have the same level of utility for an individual. Like other models, the labour supply model is a rather simple abstract representation of the real world situation which is fairly complex.

A person usually has to consider a number of factors before deciding whether to join the labour force or pursue other things in life which economists describe as leisure. For the sake of clarity, we consider work as employment i.e. work for pay and profit. In other words, work that a person carries out without pay or profit is technically defined as leisure.

To examine labour force participation in Timor-Leste we start our inquiry first by questioning the notion of equal substitutability between work and leisure. The underlying incentives to work for people in developed and poor countries are obviously not similar. It has in fact been argued that in poor countries leisure is less desirable than work Prasch (2000).

Owing to low-income, there is tendency among people in developing countries to even allocate more time for work. In other words, low-income in itself is a compelling factor for people to seek more work. Often lack of social security, limited or no savings and assets, and responsibility to support the family means that poor cannot remain unemployed.

The data clearly show this higher “preference” for work in developing countries compared to developed countries. In 2014, the labour force participation rate (LFPR) which includes employed and unemployed persons- in developed countries was around 62 percent, while the comparable figure in least developed countries (LDCs) was over 75 percent (World Bank 2015).

A high LFPR may seem to be good for the economy, but for reasons discussed above LFPR in poor countries tends to be on the higher side. The problem is compounded owing to what has been described as “disguised” employment. A large number of the workforce is either engaged in subsistence agriculture or working in the informal economy. Labour underutilisation which includes underemployed and discouraged workers is also quite widespread in developing countries (ILO 2015).

Besides factors that compel people to seek work in developing countries, there are also incentives which can encourage greater labour force participation.

Usually, economic diversification and growth of a modern industrial sector can be a pull factor to attract labour, both from

the subsistence agriculture as well as those who are outside the labour force (Cuadrado & Poschke 2011). The expectation of earning higher wages in the modern sector can incentivize employment seeking behaviour.

As we have seen, the economy of Timor-Leste is diversifying, albeit slowly, which is creating more jobs in the non-agricultural sector. The possibility of finding good jobs outside subsistence agriculture is raising expectations which in turn is encouraging more people to participate in the labour market. The downside, however, is that if job creation is limited, which is the case in Timor-Leste one is likely to see simultaneous increase in both unemployment rate and LFPR.

Economic factors are the key determinants of participation in the labour market, but these factors should be seen in a broader social and cultural context. A good starting point in this regard is the life-cycle variation framework which was developed by Mincer (1962). This framework explains choices an individual makes at various stages of life and its implication on labour supply.

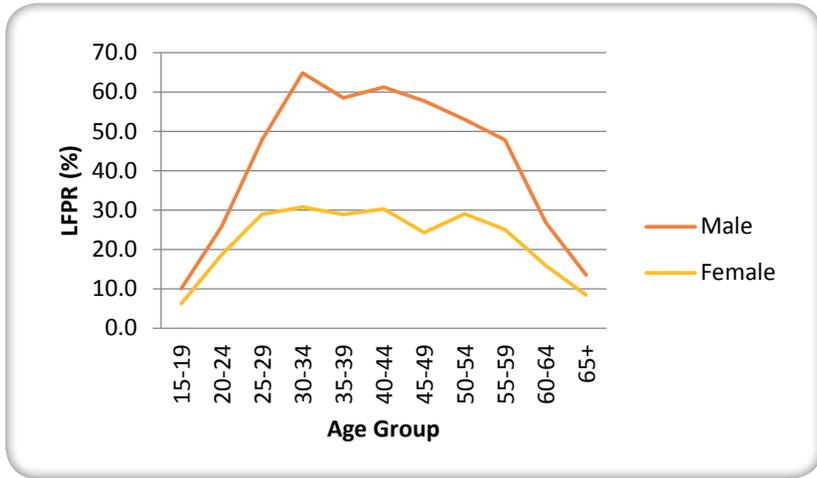
The number of years an individual pursues education after reaching the working-age can affect LFPR. Some may prefer to continue education for several years while others may be unwilling or unable to study. Marriage and raising a family can affect LFPR rate as well. It is not uncommon to see a lower LFPR among women of reproductive age.

In Figure 5 we can see the LFPR of male and female for various age groups. Both men and women are most active in the labour market when they are in the age-group between 30 and 34. However, the female LFPR exhibits a slightly different shape.

Specifically, the male LFPR continues to decline after they reach the age of 45, while the female LFPR peaks again when they are in their early fifties.

This seems to suggest that at this stage, household responsibilities for women ease up a bit, giving them more time to pursue paid employment.

Figure 5. Male and Female LFPR in Timor-Leste



Source: GDS & SEPFPOE, LFS Data 2013

Next, we look into the age-specific dimensions of labour participation. According to LFS 2013, more than 65 percent of the total Timorese population of 1,178,218 was below the age of thirty. A total of 696,255 people were of working age which included anyone above 15 years.

The breakdown of the working-age population shows that 483,033 people were economically inactive while 213,223 were in the labour force. Among the economically inactive population close to 28 percent were pursuing studies. Among the youth, LFPR tends to be lower as many are usually studying. However, in Timor-Leste LFPR rate of youth at 14.2 percent is less than half of the average national LFPR of 30.1 percent.

While LFPR among both youth and adult population is quite low compared to other developing countries, the more worrying issue is the high number of young people who, in an economic sense, are idle.

In 2013, 48,534 from an estimated total youth population of 200,000 were neither in employment nor studying (NEET). Almost 28 percent (13,228) of the youth who were categorized as idle were living in Dili. A large number (53.7 percent) of idle youth in Dili are in fact female.

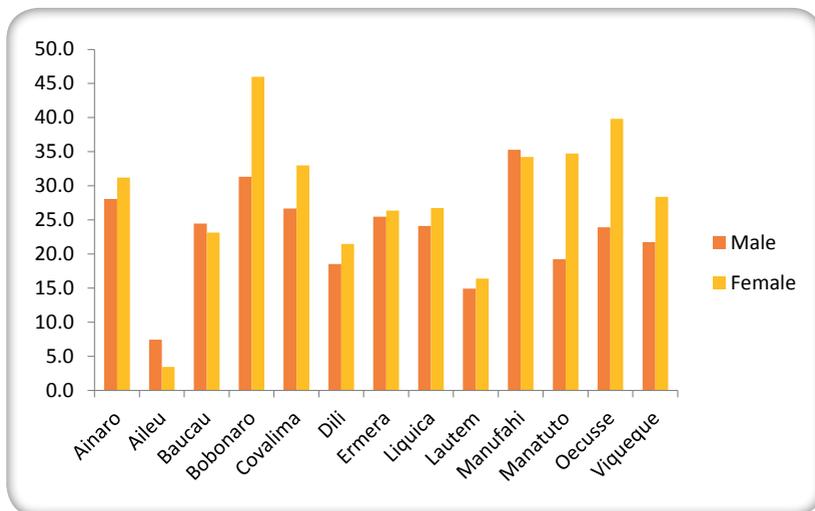
Although in absolute terms it is much lower than Dili, there are several districts with a relatively high proportion of youth in NEET. Bobonaro has the highest proportion of youth population who are idle (38.6 percent), followed by Manufahi (34.7 percent), and Oecusse (32.1 percent). Further research is needed to understand the school-to-work transition of youth in Timor-Leste.

Table 2. Youth not in education, employment or training (NEET) by sex and region

District	Male	Female	Both sexes
Ainaro	1,379	1,337	2,716
Aileu	295	120	415
Baucau	2,899	2,223	5,122
Bobonaro	2,050	2,959	5,009
Covalima	1,391	2,093	3,485
Dili	6,172	7,055	13,228
Ermera	1,028	1,247	2,276
Liquica	1,436	1,303	2,740
Lautem	906	915	1,821
Manufahi	1,371	1,605	2,975
Manatuto	504	986	1,489
Oecusse	1,318	2,311	3,629
Viqueque	1,696	1,934	3,629
Total	22,446	26,088	48,534

Source: GDS & SEPFOPe, LFS Data 2013

Figure 6. Proportion of youth in NEET by sex and region (percent)



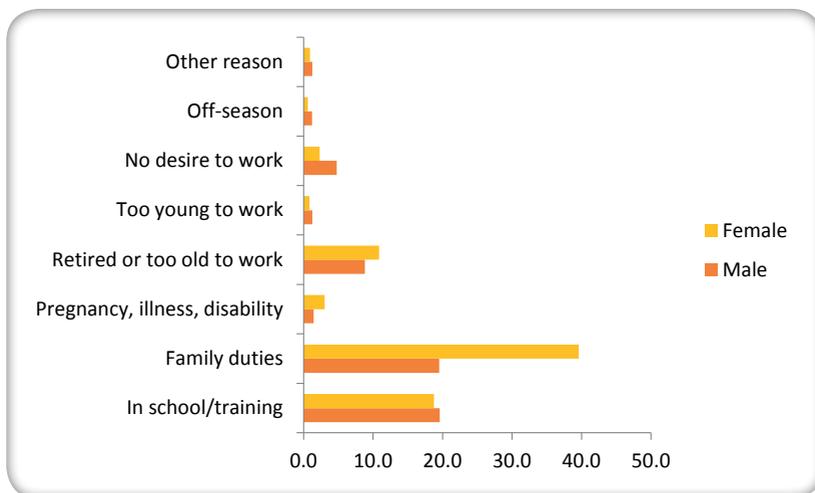
Source: GDS & SEPFPOE, LFS Data 2013

Among the economically inactive population more than 42 percent were not working owing to family duties. According to one estimate the number of inactive population who were not able to work owing to family duties increased significantly from 128,466 in 2010 to 204,738 in 2013.

It appears that the burden of family duties falls on women. Close to 67 percent of those in 2013 who are unable to look for employment as a result of their family duties were female. Life-cycle theory may explain the variation in labour participation, but what is explicitly shown by data is that there are gender specific issues which affect women more than men.

Like many developing countries, Timor-Leste is still a traditional society where women are expected to play a more active role in the household which includes various household chores and looking after the children and parents.

Figure 7. Reason of inactivity among working age population (percent)



Source: GDS & SEPFPOE, LFS Data 2013

A significantly higher proportion of people with tertiary level education are in the labour force. In 2013, LFPR of people with tertiary education was more than 70 percent compared to the national LFPR of 30.1 percent.

A higher LFPR is also noticeable among females with tertiary qualification which has more than doubled from 24.6 percent of females without tertiary qualification in 2010 to 53 percent in 2013.

In the modern industrial sector, a good education is a prerequisite for getting jobs. The data from Timor-Leste suggest that the lack of skills among local workers means that foreigners are taking up skilled jobs.

The 2014 ESS shows that nearly 60 percent of the managers in large-sized enterprises were foreigners (SEPFPOE, 2014). More than 46 percent of professionals and associate professionals were also foreigners.

Although LFPR among tertiary graduates is more than 70 percent, only 12 percent of the total labour force in the country has a tertiary degree. Obviously, low number of graduates makes it difficult for employers to fill specialised positions from the pool of local workers.

The effect of welfare programmes on labour force and employment has been extensively researched and debated in the developed countries (Alzua, Cruces and Ripani, 2013). In developing countries, there is less evidence that shows the correlation between welfare schemes and incentives to work.

One can assume that with a limited fiscal space, welfare payments are somewhat limited, but that is not always the case. Timor-Leste has three main social transfer programmes which involve payment of cash. These include payments to the veterans, unconditional cash transfers to people living with disabilities, and old age pension. There is anecdotal evidence that it is difficult to attract labour in rural areas. Many infrastructure programmes are currently ongoing. It is not uncommon to find non-Timorese workers at the construction sites doing unskilled work.

It is important to note here that welfare payments do not necessarily discourage people to work. On the contrary, there are cases, particularly in Latin America where it has been shown that certain cash payments actually encourage higher labour participation of women. For example, research has shown that conditional cash transfer programmes which require recipients to send their children to school gives women in particular more time to do work when their kids are in school (Alzua, Cruces, & Ripani, 2013).

Lastly, the methodology used for the measurement of labour force can also affect LFPR. As discussed, the revised method for measuring labour force was adopted in 2012 by the 19th

International Conference of Labour Statisticians. Subsistence foodstuff producers are no longer included in the labour force.

In Timor-Leste there are around 166,000 foodstuff producers who are outside the labour force (GDS & SEPFOPE, 2013). If all of them are included in the labour force, LFPR in Timor-Leste would increase from 30.1 percent to 51 percent, a significant increase. But, still much lower than the average LFPR in LDCs which hovered around 72 percent in 2013.

7. Conclusion

Consistent with conventional economic theory, Timor-Leste's economy can be characterized as dual-sector. On one hand there is a growing modern sector which includes industry, trade, and services. On the other hand the majority of the labour force is engaged in low productivity employment in agriculture.

The general trend is that the economy is going through early stage of structural transformation. This is evident with a declining number of people involved in subsistence food production. Also, there is reduction in the share of employment in agriculture with a concurrent increase in the number of workers in the modern sector.

The growth of services and trade sectors has added more jobs to the economy, but only construction has seen rapid expansion. This expansion has happened on the back of public investment in infrastructure.

The share of the manufacturing in the industrial sector is quite small and relatively few workers are employed in this sector. Without an expansion in manufacturing, it will be harder in future to provide an adequate number of good and productive jobs for those entering the labour force.

The other quite distinct feature of Timor-Leste is the low participation of working-age population in the labour force. High youth unemployment rate and large number of idle youth in Timor-Leste is a further manifestation of an unfavourable job market.

Slow job growth is the likely reason for low labour participation and idle youth. However, there are several proximate factors which may be limiting labour force participation in the country. These broadly include low educational attainment, skills, and social and cultural issues which particularly affect labour participation rate of females.

Structural transformation is essential for Timor-Leste to achieve economic development. Industrialized countries in the West have gone through this process of structural transformation. More recently the rapid growth in East Asia, Southeast Asia, and China has shown that such transformation can be fast tracked.

An export oriented growth underpinned by dynamic comparative advantage saw rapid changes and significant reduction in poverty rates. While policies varied, there were a number of common threads that explain the growth story of industrialized and emerging economies in Asia. Prudent macroeconomic management, trade integration, support for strategic industries, and investment in human capital were part of the policy focus.

The challenges that the private sector in Timor-Leste faces is already well documented (ADB, 2015). These include poor infrastructure, low human skills, and a weak business enabling environment. For its part, GoTL has developed several policies, introduced regulations, and is investing more in infrastructure and human development.

The paper therefore does not call for any radical policy changes, but provides a set of specific recommendations for the government to play a more proactive role in building productive capabilities of the private sector.

8. Recommendations

The modern sector of the Timorese economy has to grow significantly in order to create more productive jobs. At the moment an expansionary fiscal policy, with an emphasis on infrastructure spending is providing a stimulus to the economy. Also, GoTL is carrying out several reforms including changes in the investment law. The objective is to provide greater clarity and improve regulations to attract more investment.

There is, however, limitation to what “supply-side” reforms can do for Timor-Leste. In future, there should be greater focus on building productive capabilities of the private sector. In this regard, the government has to be more actively involved in promoting niche industries and business sub-sectors through incubators.

A dedicated facility in an industrial park to enable foreign and local companies to work together in joint ventures should be considered. Private businesses in Timor-Leste have to work in a challenging environment.

By providing businesses involved in strategic growth sectors space and access to services would be attractive for domestic and foreign investors and help to nurture manufacturing. Importantly, the incubation will engender learning and transfer of technology.

Growth in local manufacturing will ease the pressure on agriculture and accelerate structural transformation. This does not mean that agriculture should be ignored.

Even with the limitation that the country faces in terms of land productivity and climate, there is still untapped potential in agriculture, and measures are needed to improve yields and productivity so that many subsistence farmers can produce more and sell the surplus.

Besides public support for industry, GoTL needs to increase funding for vocational and technical training. It has identified human capital as a national priority in its strategic development plan.

There is a dedicated funding facility (HCDF: Human Capital Development Fund) in the budget for education and skills, but funds are generally used for overseas scholarships, training of civil servants, and community-based vocational training.

As discussed in this study, businesses often cannot find qualified workers for technical positions and thus end up hiring skilled foreign workers. With almost half of the population living under the poverty line, it is difficult for vocational training schools to charge full tuition fees. The government needs to subsidise training in the short run, either through scholarships or special grants to the schools.

Overall, these policy realignments should explicitly target women and youth. An abnormally low labour participation of women and high number of idle youth requires employment generation and skills training programmes to be customized to their needs.

However, instead of setting up dedicated programmes for women and youth, it is recommended that government takes a more systemic approach. The aim should be to mainstream youth and women as a distinct target group and help address their special needs.

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