

Rwanda's New Companies

An Overview of Registrations, Taxes, Employment and Exports

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Abstract

The Government of Rwanda has introduced several reforms since 2009 that have significantly improved the domestic business environment. One of the reforms is the one-stop shop for business registration. Making use of newly available administrative data sources such as tax and company registrations records, this paper sheds light on the effects of the introduction of the one-stop shop on company registrations,

taxes, employment, and exports between 2008 and 2012. The paper finds sizable benefits to Rwanda's efforts, which are mostly driven by the registration of large and mid-sized companies, with a limited contribution from small and micro-sized ones. The use of a newly available data source highlights the potential uses of growing bodies of administrative data and their possible shortfalls.

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RWANDA'S NEW COMPANIES AN OVERVIEW OF REGISTRATIONS, TAXES, EMPLOYMENT AND EXPORTS

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Abbreviations and Acronyms

CAGR	Compound annual growth rate
CIT	Corporate income taxes
CONT	Contributing
ISIC	International Standard Industrial Classification
OPEX	Operational expenditures
PAYE	Pay as you earn taxes
PIT	Personal income taxes
RDB	Rwanda Development Board
RRA	Rwanda Revenue Authority
Rwf	Rwandan francs
TIN	Taxpayer identification number
VAT	Value-added tax
YoY	Year-on-Year

Introduction

The Government of Rwanda has introduced a series of reforms to the domestic business environment since 2009 in a bid to reduce the administrative and financial burden of business registration. In 2009, the East African country enacted legislation entitled the Company Act, that was intended to strengthen investment protection and create a business registration one-stop shop. In the same year, it introduced other reforms, including: (i) the adoption of the Secured Transactions Law (increasing the number of collateralizable assets), (ii) the Insolvency Law (easing the process of bankruptcy), and (iii) the Mortgage Law (shortening the property registration process). Combined, these reforms left Rwanda with a substantially more business-friendly environment. A second package of reforms followed in 2010 with the introduction of online registration, the reduction of registration fees, changes to regulations on obtaining construction permits, and simplified procedures for exports and credits.¹

Cumulatively, these reforms have contributed to improving Rwanda's business environment. Although it may take time before some of these measures trigger a private sector response, Gathani, Santini, and Stoelinga (2013) argue that the creation of the one-stop shop increased registrations almost immediately by more than 180 percent.

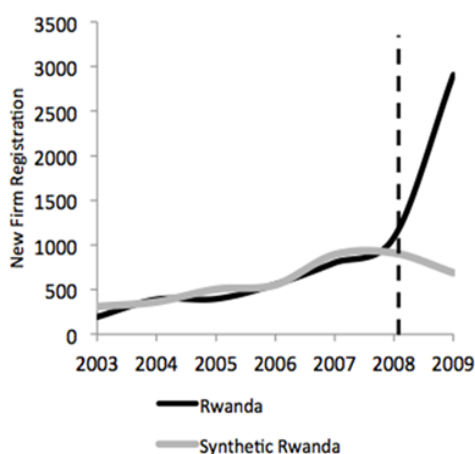
Utilizing business registration as a proxy for investor and entrepreneur interest in specific sectors, this paper reviews the trends in business registrations across various sectors and subsectors, and identifies drivers of recent growth.

By linking business registrations to tax declarations, it is also possible to verify the level of activity of newly registered companies — measured as interactions with the revenue authority — and quantify additional revenue and employment accruing from newly registered companies by size, sector, and subsector.²

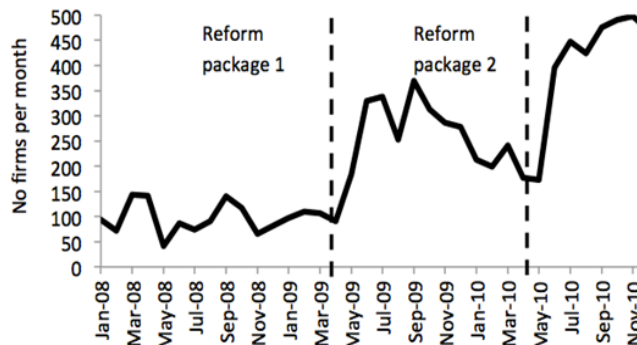
¹ This section relies on Gathani, Santini, & Stoelinga's Innovative Techniques to Evaluate the Impact of Private Sector Development Reforms: An Application to Rwanda and 11 Other Countries, 2013.

² There are various tax exemptions in Rwanda. The main exemptions are listed in the 2006 investment code, which was under review at the time this paper was written. Further exemptions may arise from negotiations between investors and the Investment Unit of RDB, by virtue of Article 19 of the Investment Code. The number of companies affected by such incentives is limited and most companies are required to report to the Revenue Authority. Although the presence of tax exemptions is unlikely to impact the analysis of registrations, it may impact estimates of tax contributions by newly registered companies (if those companies are exempt from tax reporting). As per article 18 of "Law N° 16/2005 OF 18/08/2005 on Direct Taxes on Income," incomes from agricultural activities below Rwf 12 Million are tax exempt. This article, in conjunction with its previous more generous formulation, may render most of the agriculture sector tax exempt. This may explain the little activity recorded from the sector at the tax office.

Exhibit 1: (a) New Registrations by Year



(b) New Registrations by Month



Note: “Synthetic Rwanda” is an artificial counterfactual; see Gathani, Santini, Stoelinga (2013) for details on its construction.

Source: Gathani, Santinin, Stoelinga (2013).

This paper examines new registrations and tax records at the company level, with a focus on three specific questions:

- 1) Of the large number of companies registered in recent years, how many are currently ‘formally’ active? Every formal business will have a footprint at the tax office. By checking declaration records from 2008–2012, it is possible to assess whether newly registered companies are formally active, how long they took to enter formal activity, and whether they have exited the tax net (either informally, or due to closure).
- 2) Using the number of registered companies in a sector as proxy for interest for that sector, which sectors and subsectors have received the most attention from investors and entrepreneurs?
- 3) What has been the contribution of newly registered businesses to the overall economy in terms of (a) taxes, (b) tax-bearing employment, and (c) exports? How does this vary across sectors and subsectors?

This is useful both in assessing the impact of Rwanda’s effort to improve its business environment and promote investment and in understanding investors’ and entrepreneurs’ current interests.

Findings indicate the strong growth in registrations generated a large number of new companies, 40 percent of which recorded positive tax activity and contributed to the real economy. Registrations in the services sector dwarfed the other sectors, comprising 75 percent of the total. Within services, half of these registrations have been recorded in wholesale and retail trade.

Newly registered companies played a prominent role in increasing tax declarations and creating formal jobs, contributing to a 24 percent increase in tax declarations and a 16 percent increase in the number of formal jobs. In absolute terms, newly registered companies were responsible for 15 percent of tax declarations and 11 percent of formal jobs in 2012.

The impressive results appear to be in part due to the entry of a few large players into the market since 2008—casting a positive light on Rwanda’s investment promotion efforts—as well as to the sizable contribution made by a large number of newly registered medium-sized companies. A series of privatizations in the tea and coffee sector are likely to have increased Rwanda’s commodity exports, while new entrants from across the region have significantly boosted non-commodity exports. The contribution of small firms, in contrast with their large number, appears conversely to be rather small.

Reading across the technical findings, four messages appear salient. First, given the sizable impact of newly registered companies on taxes, formal employment and exports, Rwanda’s push to improve its business environment and promote investment appears to have paid off. Second, the limited contribution of small companies would suggest that targeted formalization efforts, beyond that of lowering the costs of registration, are unlikely to yield significant returns. Third, the large amount of churn in new companies should not per se be concerning, as churn is the process through which entrepreneurs acquire knowledge of the local market. Finally, shortfalls in the data underline the importance of program design. The objective of the one-stop shop should be reflected in its data collection mechanisms so that its impact can be evaluated and improved as needed. In this context, the paper’s findings are mollified by the difficulty in establishing the precise sector in which firms operate and in differentiating between new companies and companies that are formalizing or re-registering. The latter is likely a consequence of the introduction of the Company Law of 2010, which changed the definition of companies’ legal status and required re-registration, but could be addressed with little effort on the data collection side.

This paper proceeds as follows: first, it reviews the academic literature related to business registration processes and business formalization. Second, it presents an overview of the impressive growth in Rwanda’s business registration figures, examining the extent to which it resulted in actual economic activity. Third, it adds a sectoral dimension, analyzing how growth in registrations has varied between sectors. Fourth, it analyzes the contribution of newly registered companies to growth in taxes and employment in the aggregate by size, and across sectors and subsectors. The final section summarizes and concludes.

Literature

This paper draws from two tightly linked branches of academic literature. First, it draws from the literature that addresses the effectiveness of measures to ease the business registration processes, particularly in the case of one-stop shops, and second, it draws from the literature that concerns the rationale for informal firms to formalize. This paper aims to contribute to the first of these by documenting the introduction of a set of reforms aimed at abating the cost of registration in Rwanda and the consequences these reforms had across economic sectors on formal job-creation and tax revenue. Lack of sufficiently detailed data prevents this paper from shedding light on the drivers of firm registration, and thus from contributing to the second branch of the literature.

One-stop shops and business registrations

In recent years, many countries have improved the process of business registration by reducing the time, cost, number of procedures and minimum capital requirements to start a business.

The World Bank Doing Business database indicates that more than three-quarters of the registered countries have enacted at least one reform to improve the ease of registration. Reforms typically include reducing licensing requirements, simplifying registration processes, reducing direct costs, and improving coordination among regulatory agencies. One of the most popular types of reforms is to set up "one-stop shop" registration centers.

A 2010 literature review on business entry reforms (Motta, Oviedo and Santini 2010) finds the introduction of business entry reforms, such as a one-stop shop for business registration, to be associated with an increase in the number of registered firms. They also find that a reduction in the cost of registering a business induces more registration in industries with low barriers to entry than in industries with high barriers to entry.

Examples of positive associations between the introduction of one-stop shops and increases in business registrations are found throughout the literature and across income levels. Reforms that cut registration time or cost (or both) by more than 40% during the 2003-2008 period across a sample of 92 countries are found to have had a statistically significant impact on new business creation (Klapper and Love 2010). The introduction of a one-stop shop in 308 counties of Portugal, reducing the number of days to register a business by 91%, has been associated with a 17 percent increase in registrations (Branstetter, et al. 2010). Reforms introduced in some of the most populous and economically developed municipalities of Mexico were associated with a 5 percent increase in the number of registered businesses (Bruhn 2011) (Kaplan, Piedra and Siera 2011). Similarly, the introduction of one-stop shops in six major cities in Colombia was found to be associated with an increase of 5 percent in registered businesses (Cardena and Rozo 2007).

There are however signs that these results are not necessarily universal. A recent study from the Minas Fácil Expresso program in the state of Minas Gerais, Brazil, finds that the program led to a reduction in the number of firms registering during the first two months of implementation (Bruhn and McKenzie 2013).

A number of studies also point to preliminary evidence of the effect of one-stop shops on employment. The introduction of a one-stop shop in Mexico has been found associated with a small increase in employment (Bruhn 2011). The above-mentioned introduction of the one-stop shop in Portugal was found to be associated with a 21 percent increase in employment (Kaplan, Piedra and Seira 2007). Finally, cross-country evidence shows a decrease of 61% in the number of days to register a business to be associated with an increase of 0.4% in (manufacturing) employment (Cicccone and Papaioannou 2007).

The choice to formalize

Rwanda, as most developing countries, has a large informal sector. While governments – save for policies that create barriers to entry – are interested in reducing the level of informality in the economy both to increase tax revenue and to guarantee minimum standards of labor regulation, there is no consensus on the drivers of firm formalization, and the balance between its costs and benefits for firms themselves.

Benefits from formalization include access to credit, public services, property rights and access to formal markets. Staying informal on the other hand keeps firms outside the tax net, and to a degree, beyond the reach of other regulatory burdens. Informal firms tend to be less productive than formal firms ((Dabla-Norris and Feldsten 2005) (Perry, et al. 2007)), and formal firms tend to be larger and older. Indeed, larger and foreign-owned (formal) firms in Kigali tend to have higher levels of productivity in Rwanda (Kamarudeen and Söderbom 2012).

Although the evidence remains mixed, formalization could impact productivity through a number of channels. First, formalization can improve resource allocation across the economy by inducing high-ability entrepreneurs to enter, and improve the sorting mechanism for workers (Bruhn 2013). Second, formalization at start-up affects firm choice of location, production technology, and quality of product and consequently drives differences in firm performance (Fajnzylber, Maloney and Montes-Rojas 2011). Reforms to facilitate formalization may reduce the costs for entrepreneurs to enter the market and therefore also induce entry of more formal firms (Bruhn 2011).

While a large number of idiosyncratic factors can affect a firm's decision to formalize, the cost of compliance is a direct policy lever. On one end of the spectrum, complex and costly procedures may prevent firms from becoming formal (de Soto 1989). On the other, the cost of registering may not constitute a significant barrier but rather the barrier may be that many firms are too small or too heterogeneous to gain from formalization at all ((Mackenzie and Woodruff 2006) (Mackenzie & Sakho, 2010)).

The Structure of the Economy

Rwanda is a small landlocked country, a member of the East African Community. In 2013, it had a population of 12 million and a GDP per capita of \$1,600 (PPP). Between 2006 and 2013 Rwanda's economy has averaged a real GDP growth of 7.9 percent per year, and a real GDP per-capita growth of 4.1 percent per year.³

Services, having expanded from 42 to 45 percent of real output between 2006 and 2013, is the predominant sector in the economy; followed by agriculture, which shrunk from 38 to 33 percent of real output during the same period. Industry and manufacturing are sizably smaller, making 10 and 5 percent of real output respectively.

Most of the economic activity is concentrated around consumption, which constituted 90 percent of real output in 2013 (down from 98 percent in 2006). Investment makes 25 percent of real output (dominated by construction), and imports exceed exports – which are largely concentrated in the tea, coffee and mineral sectors – by 14 percent of real output. Consistently with the structure of the economy, the 2006 – 2013 period saw economic growth driven by the non-tradable, which contributed to 73 percent of real growth.

Section 1. Registrations and Economic Activity

Trends

The number of companies that have registered in Rwanda has leapt in recent years. This holds true even when excluding from the analysis companies that have re-registered, become inactive, or closed down.

Between 2008 and 2012, the gross number of company registrations grew at a staggering compound rate of 51 percent. This added almost 25,000 companies to the registrar as compared to only about 3,700 companies that were registered up to the year 2006 (see Exhibits 10). Gathani, Santini, and Stoelinga (2013) argue that reforms in 2009 increased the flow of registrations by 186 percent relative to a “synthetic” counterfactual.⁴

The rate of growth in business registrations appears to be leveling off. Year-on-year growth in the number of registered companies slowed to 40-50 percent in 2012, down from the 90-100 percent rate registered in 2011. The trend appears to be unchanged by including or excluding re-registering companies, indicating that perhaps most existing companies with an interest in re-registering have already done so. Examining year-on-year growth in the first quarter of the year enables the sampling of an additional year of data, which confirms the trend (see panel (b) of Exhibit 10).⁵ A slowdown in the rate of registrations is to be expected given the low base.

³ Real GDP growth in 2013 fell to 4.7 percent largely on due to a slowdown in domestic demand generated by the temporary suspension of aid disbursements (The World Bank 2013)

⁴ See Gathani, Santini, and Stoelinga (2013) for details on the construction of the synthetic counterfactual.

⁵ Results do not change if the analysis is restricted to the first trimester, bimester or even month of the year. Paper that as this is growth in the stock of existing business, the rate has a lower bound at zero.

Not all business registrations imply new economic activity. Close to 13 percent of companies registered by 2008 were already present on the books.⁶ By 2012, approximately 2,000 companies, or 7 percent of gross registrations, fell into this category. Potential explanations include the newly introduced Company Act (2009), which changed companies' legal status and required them to re-register. Companies that failed to re-register would be excluded from investor tax incentives⁷ and government tenders.⁸

New registrations do not necessarily all convert into activity.⁹ Up until 2012, about 12,000 companies, or 42 percent of the total registrations, were still inactive. Trends show that more than 80 percent of registered companies become active in the year they register, declining sharply to 14 percent after one year of inactivity (see Exhibit 11). Going by this, one can expect slightly more than 1,000 companies registered as inactive in 2012 to become active in 2013.

There are a number of possible explanations for the high rate at which companies become active in their first year of formal registration. First, it could be the result of business formalization as companies already in operation are pushed into registration and caught in the tax net.¹⁰ Second, the sectoral make-up of the companies registered may play a role. Around 40 percent of registrations are in wholesale and retail trade, a subsector in which startup capital is low and turnover is immediate. It would therefore make sense for companies to begin interacting with the tax authorities in their first year of operation.

Given the robust growth in company registrations, the large and rapidly growing number of inactive companies is not unusual. Underdeveloped businesses might have been tempted by the cheap and easy process of registration to acquire legal status.

Some newly registered companies seem to have closed. Approximately 11 percent of registered companies appear to have stopped interacting with the tax authority, having perhaps discontinued operations or slipped into informality.

This leaves the count of active companies at 41 percent of the total number of registered companies. Despite this trimming, the number of registered and active companies increased more than four-fold from 2,700 in 2008 to about 12,000 in 2012 — or an impressive compounded annual growth rate of 34 percent (see Exhibit 11 panel (b)).

The large share of inactive or closed companies need not be a sign of concern as long as the share of active companies keeps growing. Churn is a physiological component of the economy, especially among small firms (Haltiwanger 2012). As entrepreneurs experiment with new projects, fail and learn along the way, they contribute both to the real economy and to the accumulation of knowledge.

⁶ A number of companies were found to have registered with the Rwanda Development Board (RDB) after having been registered with the tax authorities for a number of years.

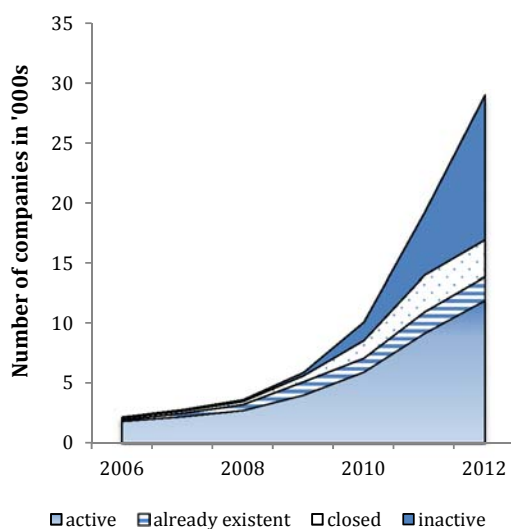
⁷ See the 2005 Rwanda Investment Code for more detail on the types of incentives available to investors.

⁸ More subtle explanations also exist: for example, close scrutiny shows two large insurance companies re-registering to comply with newly introduced regulations mandating the legal separation of their life and non-life products.

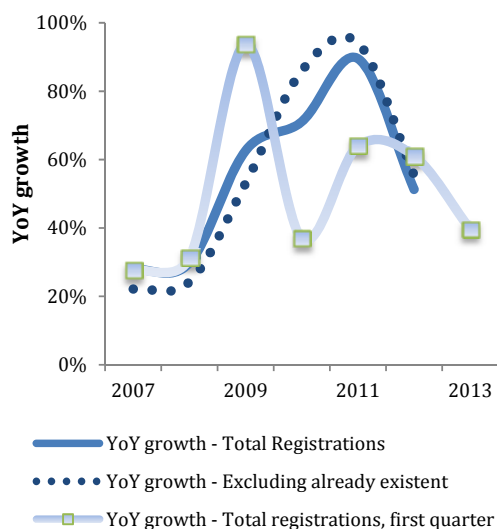
⁹ For a detailed explanation of the extrapolation of whether a company is active, see Annex 1.

¹⁰ The New Times: <http://www.newtimes.co.rw/news/index.php?i=15035&a=55233>.

Exhibit 2: (a) Companies Registered by Status

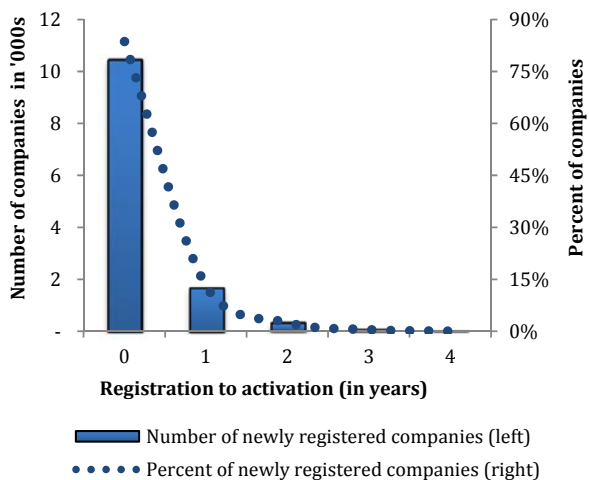


(b) Year-on-Year Growth in Registrations



Note: Companies fluctuating in and out of the tax net are excluded from the analysis due to data issues. See Annex 1 for more detail. YoY = year-on-year.

Exhibit 3: (a) Company Registration to Activation in Number of Years



(b) Growth in Registrations by Status of Activity

	2008 – 2012	CAGR	Contribution
Active		0.34	0.38
Already existent		0.32	0.07
Closed		0.62	0.11
Inactive		1.45	0.45
Total		0.51	1.00

Note: Panel (a) shows the number of years it takes for a registered company to become formally active. Both active and closed companies are included. Closed companies are those for which no tax activity is registered in the previous fiscal year (see Annex 1 for more detail).

Panel (b) shows the Compound Annual Growth Rate (CAGR) in the number of registered companies by status of activity between 2008 and 2012. It also shows the contribution (Cont.) of newly registered companies, by status of activity, to growth in total registrations. Companies for which activity could not be determined due to data issues are omitted from the table.

Exhibit 4: Activity Status by Sector

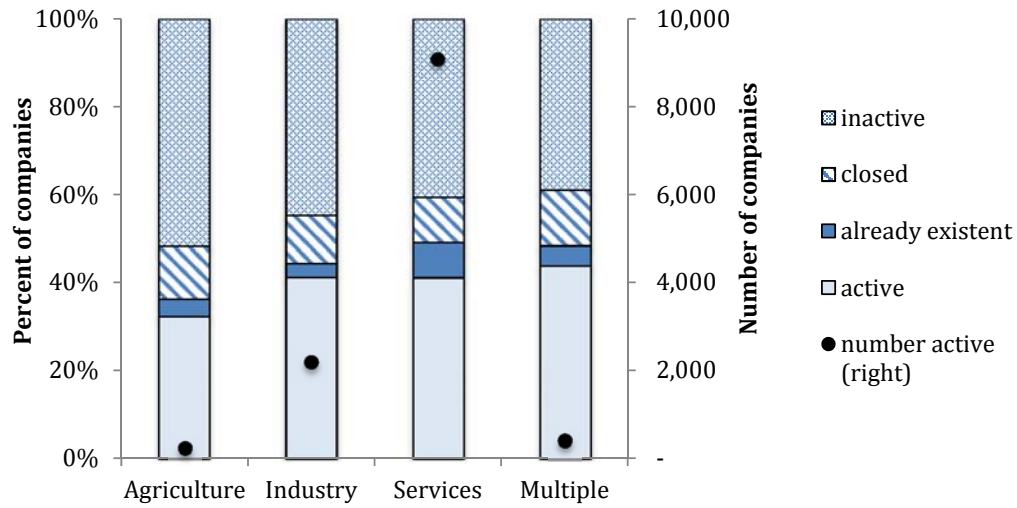


Exhibit 5: Growth in Active Companies by Sector

2008 - 2012	CAGR	Contribution
Agriculture	0.43	0.02
Industry	0.31	0.18
Services	0.35	0.77
Multiple sectors	0.29	0.03

Note: Shows the Compound Annual Growth Rate (CAGR) in the number of registered active companies by sector between 2008 and 2012. It also shows the contribution (Contribution) of newly registered active companies, by sector, to growth in registered active companies. Companies for which activity could not be determined due to data issues are omitted from the table.

Registrations by Sector

Three out of four new companies are registered in the services sector, and half of those are in trade. Registrations in the services sector have grown at a compound annual growth rate of 45 percent between 2006 and 2012, contributing to 76 percent of total growth in business registrations (see Exhibit 14). Within the services sector, more than half of growth is due to wholesale and retail trade. When taken together, real estate, business services and transport storage, and communications account for an additional 19 percent of the growth of business registrations in the services sector (Exhibit 21).

Registrations in tourism have grown rapidly, at a compound annual rate of about 40 percent between 2006 and 2012. However tourism registrations only contributed to 5 percent of the overall growth during this period (see Exhibit 21).

The services sector also has the largest share of active companies (See Exhibit 12). The limited amount of start-up capital required in the wholesale and retail trade and its rapid turnover will likely result in immediate interactions with the tax authorities, the measure used for activity.

The enormous share of registered companies housed in wholesale and retail trade, warrants further investigation into business lines drawing interest. Within the subsector, about half of all registered business lines are in retail trade, 45 percent are in wholesale trade, while the remaining 5 percent are in trade and repair of motor vehicles. In retail, 'food' and 'books, newspapers, and stationary' comprise 21 percent and 10 percent of business lines respectively, with 31 percent going to non-specialized sales. In wholesale, 'agricultural raw materials and livestock' and 'construction materials' comprise 10 percent and 18 percent respectively, with 26 percent going to non-specialized wholesale.

Although the large proportion of non-specialized retailers and wholesalers (see the last category in Exhibit 20) limits the possibility of drawing inferences, a number of factors might be driving the interest in internal trade. First, it might reflect a diversification away from agriculture — particularly as retail trade constitutes a low start-up capital alternative. Second, increasing domestic purchasing power could justify growth in food, books and newspapers, construction, and agriculture; a hypothesis favored by the fact that about half of the businesses registered after 2008 have filed taxes in Kigali. Third, it may indicate that businesses in Kigali were more likely to formalize, or were urged by authorities to register their operations as part of formalization campaigns.

Mining, Manufacturing, and Construction segments drive growth in industry. Registrations in industry grew at a compound annual rate of 42 percent between 2006 and 2012, contributing to 18 percent of overall registration growth (see Exhibit 21 1). Mining and quarrying recorded the strongest growth, with a compound annual growth rate of almost 70 percent, with 706 companies registered (starting from an initial base of only 18 companies in 2006). Manufacturing contributed to 28 percent of industry registration growth, and grew at a compound rate of 46 percent a year, with a total of 1,494 registrations in 2012. Construction contributed to about half of the registrations in industry, increasing by a compound annual growth rate of 37 percent, with a total of about 2,700 companies in 2012.

Within mining and quarrying, 28 percent of business lines were registered in quarrying, and 20 percent were registered in support activities to both mining and quarrying. In manufacturing, 17 percent of business lines were registered in the manufacture of food

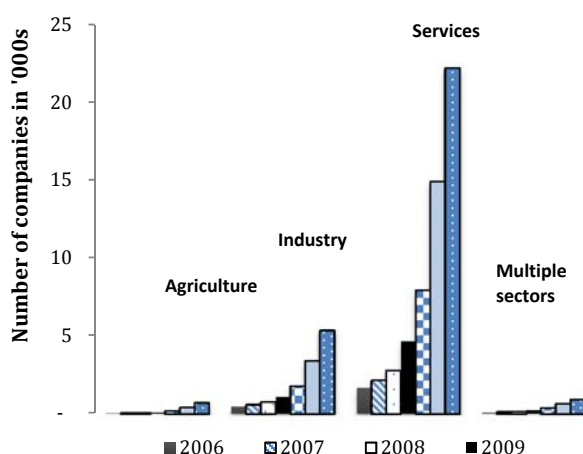
products, 13 percent were registered in printing, and an additional 15 percent were registered in the repair of machinery and equipment.

Agriculture is the sector with the fastest rate of growth in registrations, although from a very low base. From a count of about 40 companies in 2006, agriculture accounted for 700 registered companies in 2012. Within agriculture, the large majority of registrations — making up 85 percent of the growth — were recorded in crop and animal production. Notably, approximately 20 percent of business lines in agriculture are in the category of support services to agriculture.

Agriculture has a considerably lower share of active companies than do the services sector and industry — with a correspondently higher percentage of inactive companies. Low tax activity in agriculture could be due to the complications in obtaining land rights. However, it may also be due to the de-facto tax exemption of the sector, which makes it difficult to observe tax-related activity.¹¹

As a general caveat to this section, it is important to note that the data used for this analysis limits somewhat the sector inference that can be drawn. First, the economic basis (or speculative motive) that serves to generate interest in one sector or another might alter over time. Existing interest in a sector is not necessarily indicative of the strategic nature or the future potential of that sector. Second, business life cycles differ across various sectors, making it difficult to form a comparison of the performance of investments that have taken place at the same time in different sectors. Higher tax contributions in one sector do not necessarily equate to better performance; they might simply reflect different stages of the business cycle. Third, large changes in tax receipts or employment in a small economy such as Rwanda’s are often due to the entry of a large player or a privatization. These are events that can be expected to occur infrequently. In this context, they can distort sector statistics. Finally, as detailed in the technical annex, the data do not provide the definition of the sector in which a company operates, which has to be imputed by its business lines, a procedure which leaves some margin of error.

Exhibit 6: (a) Registrations by Sector and Year



(b) Dominance of Wholesale and Retail Trade



¹¹ Companies in the sector with income below 12 Rwandan francs (RwF) million are exempt from income taxes and all agricultural produce is exempt from value-added taxes (VAT).

Exhibit 7: Growth in Registrations (all companies excluding re-registrations) by Sector

2006 - 2012	Agriculture	Industry	Services	Multiple Sectors	Total
(i) CAGR	0.51	0.42	0.45	0.39	0.44
(ii) Contribution	0.02	0.18	0.76	0.03	1.00
(iii) Standard deviation YoY 2007-12	0.32	0.24	0.24	0.21	0.23

Note: The chart shows:

- (i) The Compound Annual Growth Rate (CAGR) in the number of registered companies, by sector, between 2006 and 2012.
 - (ii) The contribution of newly registered companies to growth in the total number of registrations by sector.
 - (iii) The standard deviation of the year-on-year (YoY) growth over the period. A large standard deviation indicates volatile growth in the sector.
- All companies except re-registrations are included.

Exhibit 8: Agriculture: Registrations by Subsector

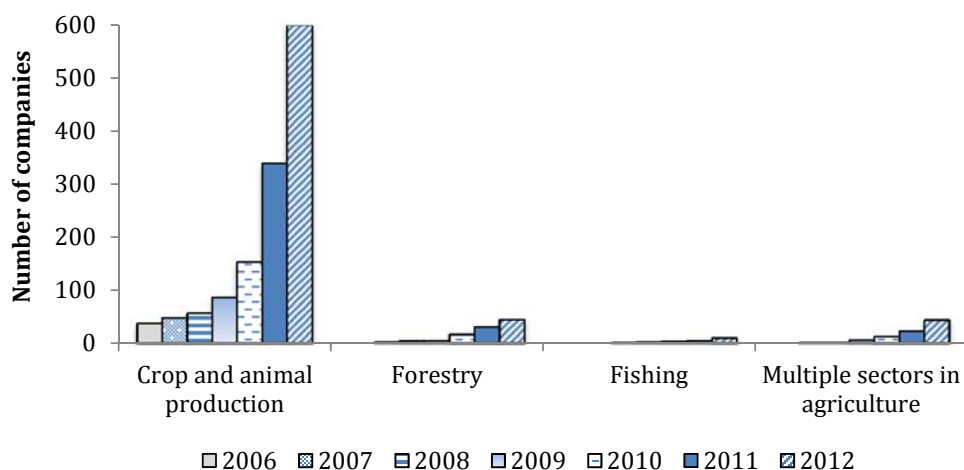


Exhibit 9: Industry: Registrations by Subsector

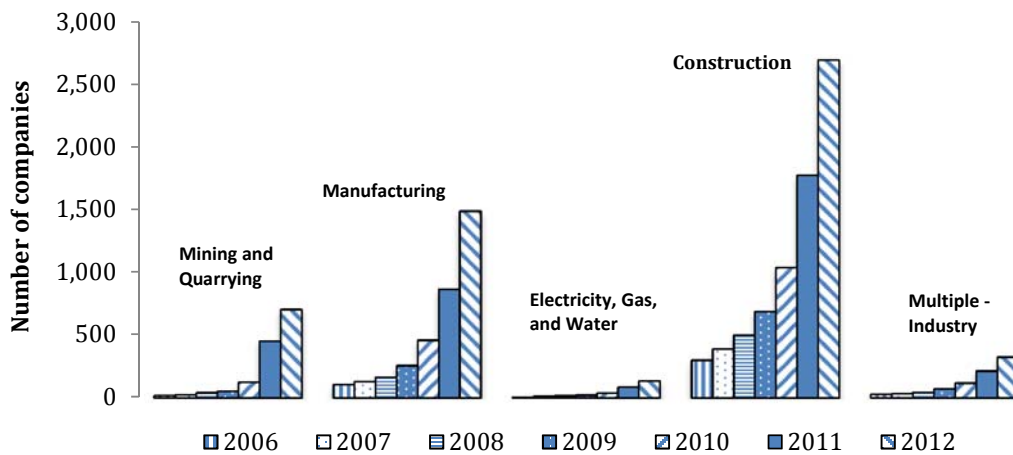
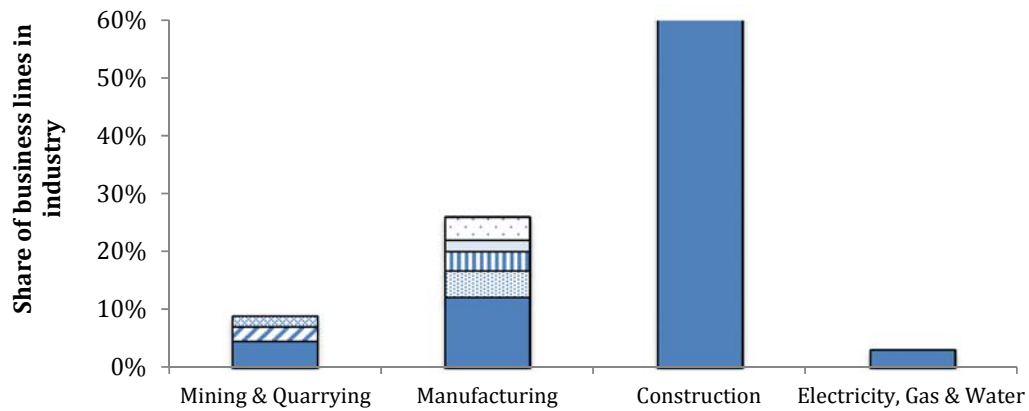


Exhibit 10: Industry: Business Lines by Subsector (total)



Note: In Mining & Quarrying, in descending order: (i) Support activity services, (ii) Quarrying of stone, sand, and clay; and (iii) All others. In Manufacturing, in descending order: (i) Repair and installation of machinery and equipment, (ii) Manufacture of textiles; (iii) Printing and reproduction of recorded media; (iv) Manufacturing of food products; and (v) All others. In Construction and Electricity, the dominant category is “All others.”

Exhibit 11: Services: Registrations by Subsector

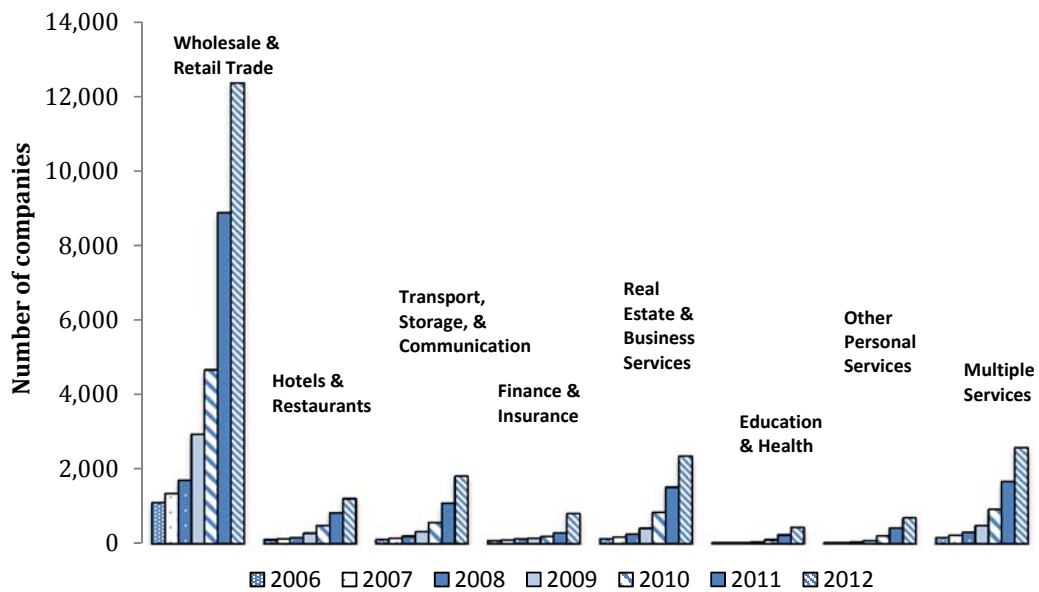
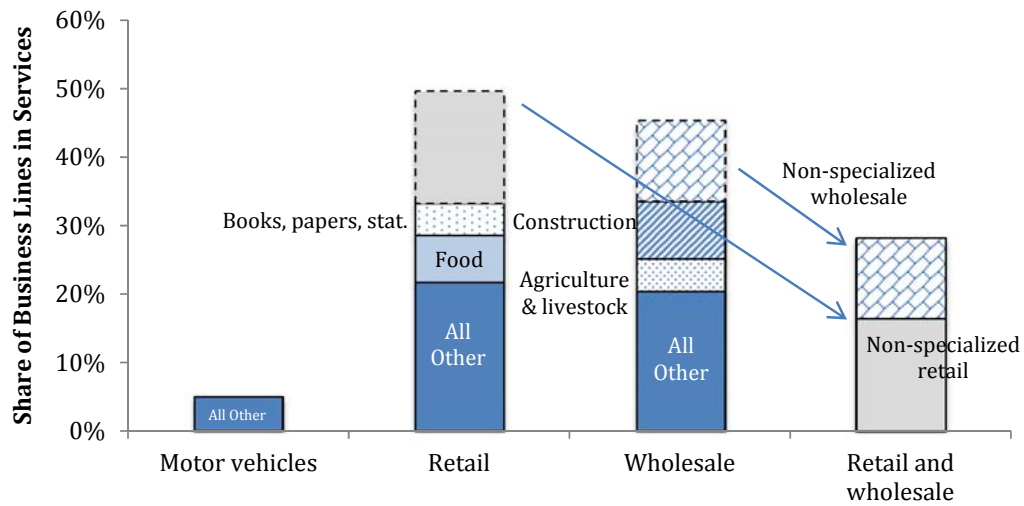


Exhibit 12: Services: Business Lines by Subsector (total)



Note: The dotted area on the “retail” and “wholesale” categories indicates non-specialized trade activities. These are stacked in the “retail and wholesale” category to show relative size in proportion to specialized activities.

Exhibit 13: Growth in Registrations (all companies excluding re-registrations) by Subsector

2006 – 2012	CAGR	Contribution to Sector Growth	Standard Deviation
	(i)	(ii)	(iii)
<u>AGRICULTURE</u>			
Crop and animal products	0.48	0.85	0.38
Forestry	-	0.07	0.94
Fishing	-	0.02	0.78
Multiple – agriculture	-	0.07	1.87
Total – agriculture	0.52	1.00	0.33
<u>INDUSTRY</u>			
Mining, quarrying	0.69	0.14	0.89
Manufacturing	0.46	0.28	0.28
Electricity gas and water	0.65	0.03	0.55
Construction	0.37	0.49	0.16
Multiple – industry	0.43	0.06	0.22
Total industry	0.42	1.00	0.24
<u>SERVICES</u>			
Wholesale and retail trade	0.41	0.55	0.27
Hotels and restaurants	0.43	0.05	0.25
Transport, storage, and communications	0.50	0.08	0.22
Finance, insurance	0.39	0.04	0.61
Real estate, business services	0.52	0.11	0.25
Education and health	0.56	0.02	0.53
Other personal services	0.67	0.03	0.41
Multiple – services	0.50	0.12	0.21
Total - services	0.44	1.00	0.24

Note: The chart shows:

- (i) The Compound Annual Growth Rate (CAGR) in the number of registered companies, by subsector, between 2006 and 2012.
- (ii) The contribution of newly registered companies to growth in the total number of registrations, by subsector.
- (iii) The standard deviation of the year-on-year growth over the period. A large standard deviation indicates volatile growth in the sector.

All companies except re-registrations are included.

Section 2. Taxes and Employment

Trends

Growth in tax declarations from newly registered companies has been robust in both absolute and relative terms. In absolute terms, total declarations from newly registered companies grew at a compound annual rate of 115 percent (from a low of only 1 percent of total declarations). In relative terms, newly registered companies accounted for 24 percent of the increase in declarations, making up 15 percent of total tax declarations in 2012 (see Exhibit 22).

This can be further disaggregated by tax-base, with newly registered companies contributing to 46 percent of the increase in corporate income tax (CIT) declarations,¹² 11 percent of pay as you earn (PAYE),¹³ 34 percent of value-added tax (VAT), and 39 percent of import duties (see Exhibit 22).

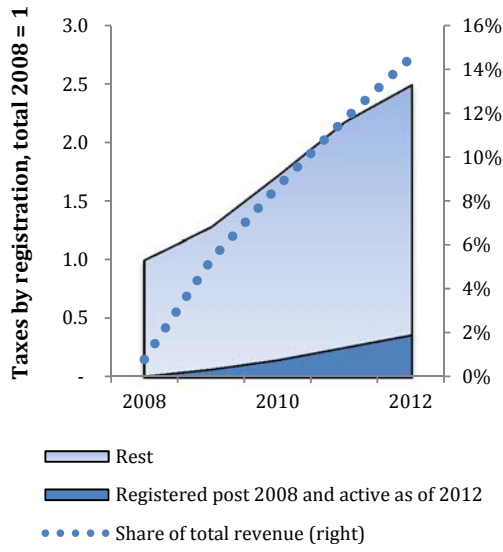
Newly registered companies helped to widen the tax base. Since 2008, a number of large companies have entered the market, including Tigo, Airtel, Kenya Commercial Bank, Nakumatt supermarkets, PwC, Engen, and Gisovu Tea Factory. The 10 largest newly registered taxpayers accounted for approximately one third of additional declarations in 2012, with the rest coming from smaller newly registered companies. From a revenue perspective, this is a promising development as it indicates a widening of the tax base.

Newly registered companies made a sizable contribution to employment growth. From a starting point of approximately 650 jobs, or 0.7 percent of taxable employment, the number of taxable jobs in newly registered companies increased 46-fold between 2008 and 2012, reaching 11 percent of the total and contributing 16 percent of the overall growth in taxable employment. The surge appears to be in part due to the privatization of a number of tea companies, as well as to new entrants in the construction, mining, and manufacturing sectors. The 10 biggest newly registered employers contributed to about a third of the additional jobs.

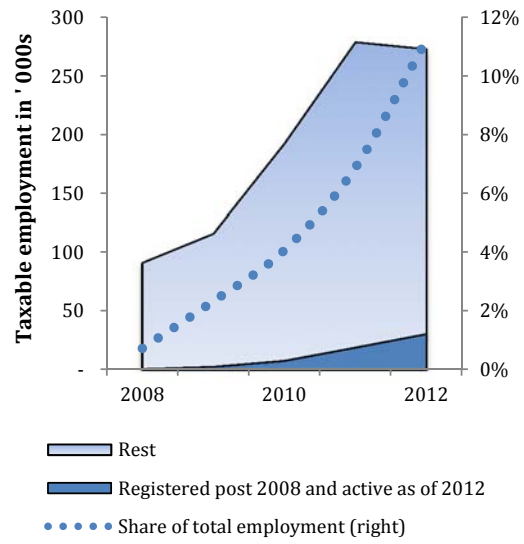
¹² In 2012, CIT declarations by newly registered companies comprised 14 percent of CIT declarations. Of this, approximately 6 percent came from companies filing in the Medium Taxpayer's office.

¹³ Pay as you earn – employers withholding tax on employees salary.

Exhibit 14: (a) Total Taxes by Registration



(b) Taxable Employment by Registration



Note: Taxes include: Corporate Income Taxes (CIT), Pay As You Earn (PAYE) taxes, Personal Income Tax (PIT), Value-Added Tax (VAT), and import duties declaration.

Exhibit 15: Employment and Taxes by Status

2008 - 2012	Registered Companies: Post-2008 and Active as of 2012			All Taxpayers (memo)	
	(a)			(b)	
Tax Base	CAGR	Contribution to Tax Base	Contribution to Total	CAGR	Contribution to Total
	(i)	(ii)	(iii)	(iv)	(v)
CIT	0.67	0.46	0.03	0.07	0.05
PIT	0.84	0.07	0.00	0.91	0.01
PAYE	1.44	0.11	0.06	0.67	0.51
VAT	1.25	0.34	0.09	0.49	0.25
Duties	1.38	0.39	0.07	0.26	0.18
Employment	1.16		0.16	0.25	1.00

Note: CAGR = Compound Annual Growth Rate; CIT = corporate income taxes; PAYE = pay as you earn taxes; PIT = personal income tax; VAT = value-added tax.

Panel (a) of Exhibit 22 refers to companies registered after 2008 and active as of 2012 (dubbed for simplicity as “Relevant”). It shows:

- (i) Compound Annual Growth Rate (CAGR) in tax declarations (by tax base) and employment from 2008 to 2012;
- (ii) Changes in declarations by relevant companies in a given tax base relative to change in declarations by all taxpayers in the same tax base; and
- (iii) Change in declarations by relevant companies in a given tax base relative to change in declarations by all taxpayers in all tax bases combined.

Panel (b) of Exhibit 22 refers to all taxpayers. It shows:

- (i) Compound Annual Growth Rate (CAGR) in tax declarations (by tax base) and employment from 2008 to 2012; and
- (ii) Change in declarations by all taxpayers in a given tax base relative to change in declarations by all taxpayers in all tax bases combined.

Taxes and Employment by Firm Size

More than half of all newly registered and active companies are small businesses. In 2012, 62 percent of newly registered and active companies filed income taxes under one of the two simplified tax regimes (see Exhibits 24 and 25), implying annual turnover of less than Rwf 50 million (approximately USD 77,000).

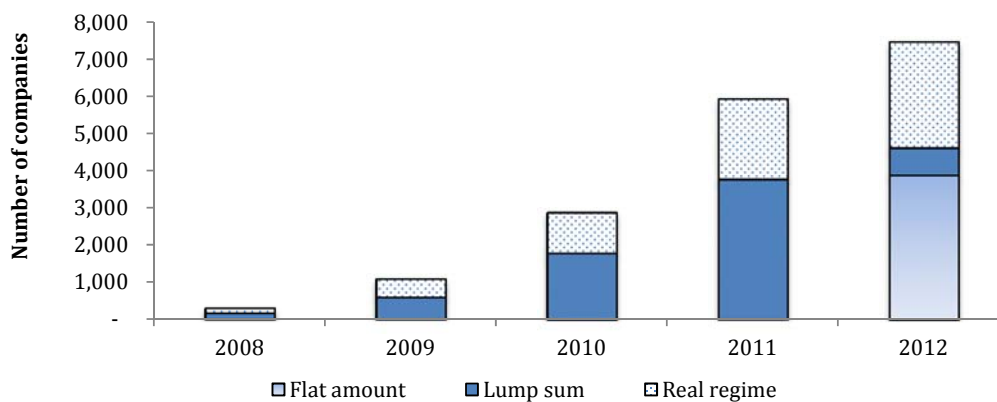
Despite being numerous, the contribution to taxes and employment from small businesses is minor. In 2012, companies filing taxes under one of the two simplified tax regimes contributed only 2 percent of the overall tax declarations and 2 percent of the taxable employment generated by newly registered companies.¹⁴ The remainder accrued to fully-pledged taxpayers.

Large taxpayers contributed to almost half of the additional tax receipts and one third of formal jobs. Approximately 30 large taxpayers (see Annex 1 for definition of ‘large’) have been registered. These contributed 45 percent of all tax declarations and 33 percent of all employment generated by newly registered companies in 2012.

Medium sized companies made perhaps the most important contribution, bringing in more than half of the additional tax receipts and two-thirds of the formal jobs. Medium-sized companies represent 37 percent of newly registered and active companies. They contributed to 54 percent of the additional tax declarations and 64 percent of the additional employment in 2012.

Given the limited contribution of small firms, explicit formalization drives would not seem cost effective. Efforts for micro and small firms could focus, for instance, on improving the business environment, increasing access to finance, lowering registration costs, and simplifying registration requirements, as the costs of explicit formalization drives are unlikely to be paid back in additional tax revenue.

Exhibit 16: New Registrations by Tax Regime



Note: Refers only to companies registered after 2008 and active as of 2012 (dubbed for simplicity as “Relevant”).

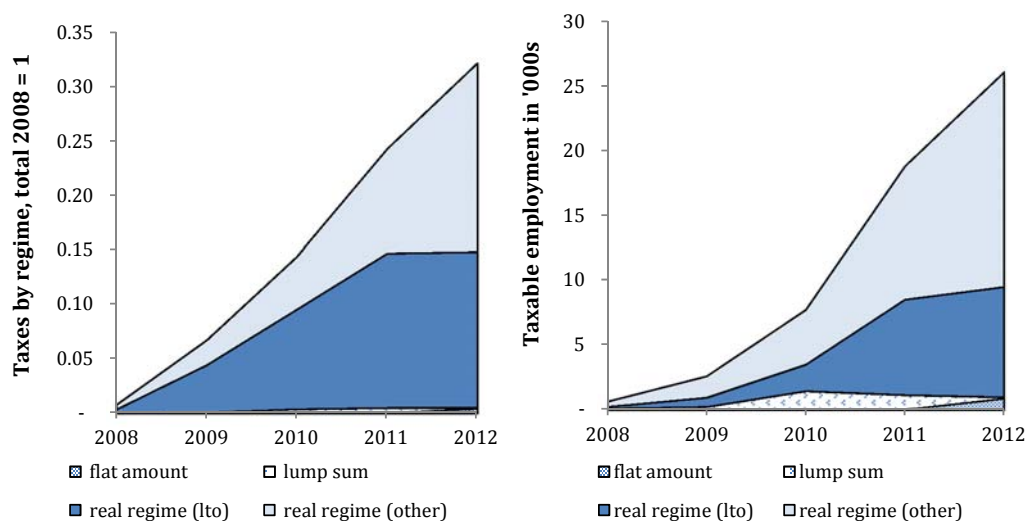
¹⁴ For a review of evidence of formalization and tax revenue see (Bruhn & McKenzie, 2013).

Exhibit 17: Growth in Taxes and Employment by Tax Regime

2008 – 2012	CAGR	2012 Share
	(i)	(ii)
Number of Companies		
Small taxpayers	1.97	0.62
Real regime	1.84	0.38
Taxes		
Small taxpayers	1.76	0.02
Real regime (LTO)	2.14	0.45
Real regime (other)	2.09	0.54
Taxable Employment		
Small taxpayers	1.66	0.02
Real regime (LTO)	2.27	0.33
Real regime (other)	2.09	0.64

Note: Shows (i) the Compound Annual Growth Rate (CAGR) in the number of registered companies, tax declarations, and taxable employment by tax regime between 2008 and 2012, and (ii) their share in 2012. Small taxpayers refer to taxpayers who fall under both the “lump sum” and “flat amount” regimes. The “LTO” refers to the large taxpayer’s office, and the category of “other” companies in the real regime represents, presumably, medium-sized companies.

Exhibit 18: Total Taxes by Tax Regime



Note: Taxes include: Corporate Income Taxes (CIT), Pay As You Earn (PAYE) taxes, Personal Income Tax (PIT), Value-Added Tax (VAT), and import duties declaration. Both panels of the exhibit refer only to companies registered after 2008 and active as of 2012. “LTO” refers to the large taxpayer’s office.

Taxes by Sector

Newly registered companies in the services sector account for about 20 percent of the growth in total tax declarations in 2012. This finding is expected, given the high number of companies registered under the services sector. 'Wholesale and retail trade' companies contributed to about 30 percent of the growth in tax declarations from the services sector, with 'transport storage' and 'communications' contributing an additional (approximately) 20 percent to the total (see Exhibit 27). The latter was mostly due to new entrants in the segment of telecommunications.

Industry contributed to about 4 percent of growth in total tax declarations (see Exhibit 27 and 28), driven in turn by mining (18 percent), manufacturing (30 percent), and construction (42 percent) (see Exhibit 32).

The contribution of newly registered companies in agriculture was negligible, despite the high growth of the sector. This was most likely the result of its largely tax-exempt status.

Employment by Sector

The increase in taxable employment has been fairly evenly spread across sectors, although with services and manufacturing constituting the bulk. The increase in employment seen in companies that operate across multiple sectors is almost exclusively due to a tea company that registered two activities – one in services and the other in industry.

Companies in the services sector average out at being the smallest (see Exhibit 31). Since each company has an average of two employees, the high number of jobs in the sector reflects the large number of companies registered. The services sector contributed to about seven percent of the growth in taxable employment, with the wholesale and retail trade accounting for approximately a quarter of that. Hotels and restaurants accounted for 17 percent, transport storage and communications delivered 13 percent, and real estate and business services came in at 20 percent.

Newly registered companies in mining and quarrying have delivered the highest number of new jobs. The increase in employment in industry is due to mining and quarrying (44 percent), manufacturing (22 percent), and construction (32 percent). In particular, a spurt in mining and quarrying saw the segment contribute to the 3 percent of growth in total taxable employment (see Exhibit 32). A limiting factor of the data is that it does not permit further disaggregation to identify the drivers of growth in taxable employment from within the mining sector. However, at least 1,600 of the approximately 5,000 jobs generated by newly registered companies in the mining sector in 2012 are found in companies registered in mining support activities. Employment in mining and quarrying is highly concentrated, with the top 10 employers in 2012 providing 65 percent of the jobs in the subsector.

Jobs in agriculture are the most likely to be understated in this exercise. In 2012, agriculture accounted for approximately 800 jobs. First, the de-facto tax exempt status of the sector means that companies are less likely to be captured in tax data. Second, it is likely that a significant proportion of agricultural jobs are paid below the minimum taxable income (RwF 360,000). Third, as mentioned above, a large tea company has been classified under "multiple sectors," It is unclear whether this should be agriculture, but the results would be significantly different if so.

Exhibit 19: Contribution to Tax Growth by Subsector

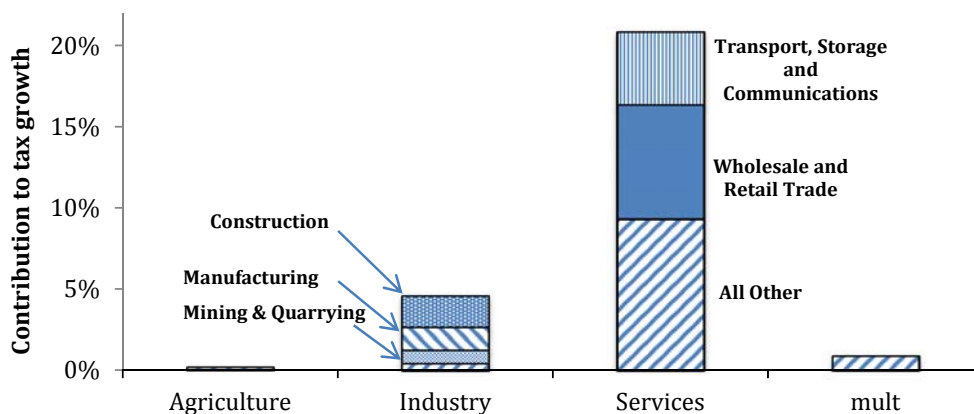
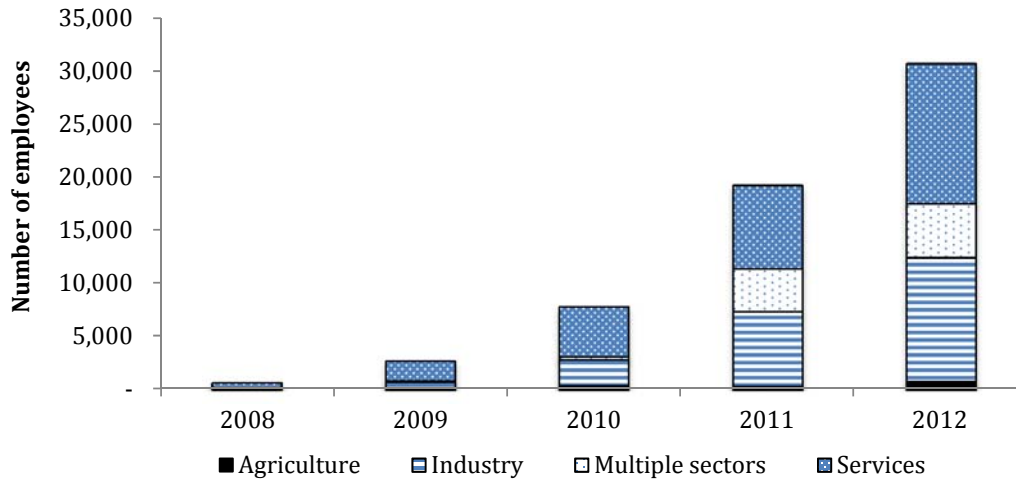


Exhibit 20: Growth in Taxes and Employment by Sector

2008 – 2012	Taxes		Employment	
	CAGR	Contribution	CAGR	Contribution
Agriculture	2.86	0.00	0.00	2.31
Industry	1.58	0.04	0.06	1.43
Services	1.09	0.19	0.07	0.92
Multiple Sectors	2.23	0.01	0.03	2.54

Note: This table shows the Compound Annual Growth Rate (CAGR) in tax declarations and taxable employment of relevant companies by sector between 2008 and 2012. It also shows the contribution of relevant companies to the overall growth in tax declarations and taxable employment. “Relevant” companies are those registered after 2008 and active as of 2012.

Exhibit 21: Taxable Employment by Sector and Year



Note: Refers to companies registered after 2008 and active as of 2012 (dubbed for simplicity as “Relevant”). The large growth in employment in companies operating in multiple sectors is almost exclusively due to a tea company that registered two activities - one in services and the other in industry.

Exhibit 22: Contribution to Taxable Employment by Subsector

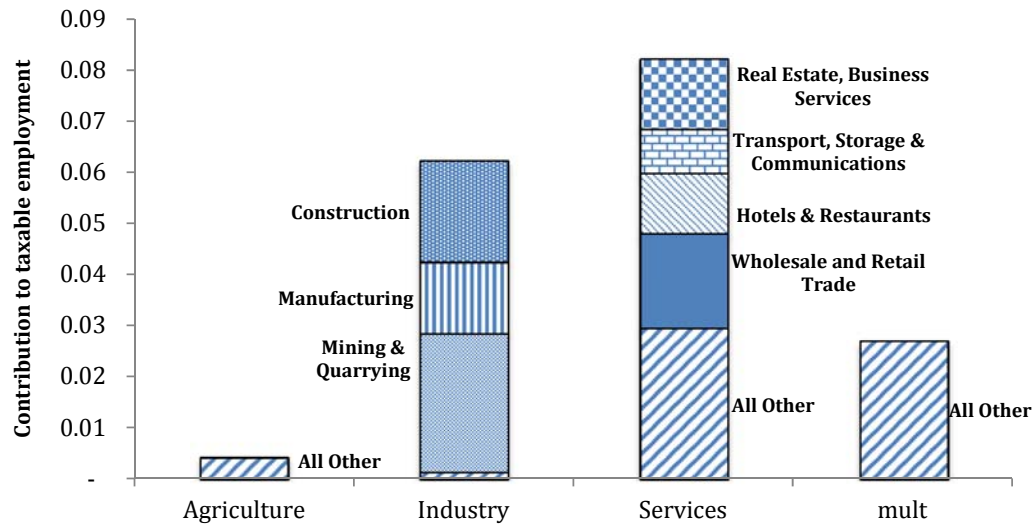
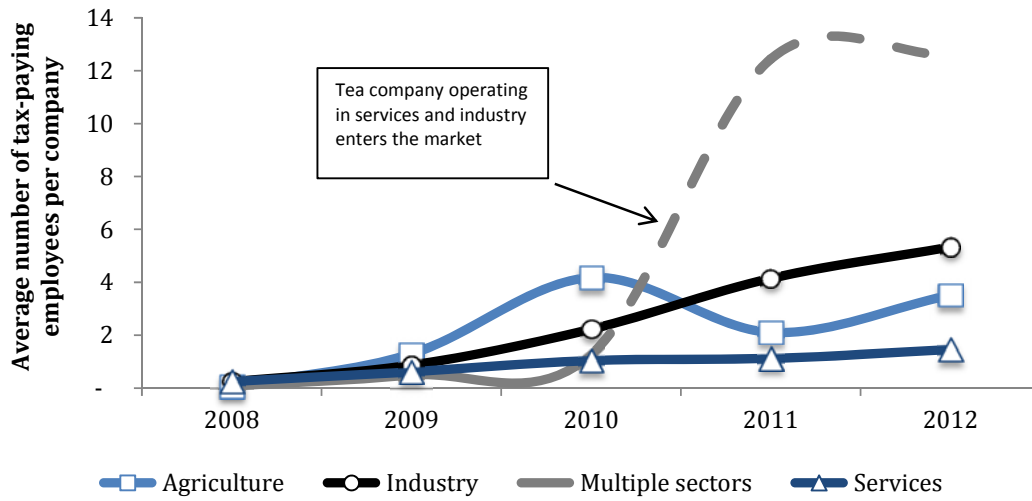


Exhibit 23: Taxable Employment per Company by Sector



Note: Refers to companies registered after 2008 and active as of 2012 (dubbed for simplicity as “Relevant”). The large growth in employment in companies operating in multiple sectors is almost exclusively due to a tea company that registered two activities, one in services, and another in industry and is thus classified as operating in multiple sectors. The “Multiple Sectors” line becomes dotted when such company enters operations.

Exhibit 24: Growth and Contribution to growth of Taxes and Taxable Employment by Subsector

2008 - 2012	Taxes			Employment		
	CAGR	Contri- bution to Sector	Contri- bution to Total	CAGR	Contri- bution to Sector	Contribution to Total
	(i)	(ii)	(iii)	(i)	(ii)	(iii)
<u>AGRICULTURE</u>						
Crop and animal production	2.83	0.97	0.00	2.30	0.98	0.00
Forestry	-	0.00	0.00	-	0.00	0.00
Fishing	-	0.02	0.00	-	0.01	0.00
Multispectral – Agriculture	-	0.01	0.00	-	0.00	0.00
Total – Agriculture	2.86	1.00	0.00	2.31	1.00	0.00
<u>INDUSTRY</u>						
Mining, quarrying	1.44	0.18	0.01	2.02	0.44	0.03
Manufacturing	1.28	0.30	0.01	1.48	0.22	0.01
Electricity gas and water	1.24	0.02	0.00	0.48	0.01	0.00
Construction	2.23	0.42	0.02	1.29	0.32	0.02
Multispectral – Industry	3.31	0.07	0.00	0.63	0.01	0.00
Total - Industry	1.58	1.00	0.05	1.43	1.00	0.06
<u>SERVICES</u>						
Wholesale and retail trade	0.79	0.34	0.07	0.72	0.27	0.02
Hotels and restaurants	0.96	0.04	0.01	0.93	0.17	0.01
Transport, storage and communications	1.28	0.22	0.04	1.21	0.13	0.01
Finance, insurance	2.23	0.06	0.01	1.01	0.05	0.00
Real estate, business services	1.44	0.09	0.02	1.05	0.20	0.01
Education and health	-	0.01	0.00	-	0.04	0.00
Other personal services	1.16	0.01	0.00	0.59	0.03	0.00
Multispectral – Services	2.42	0.24	0.05	1.51	0.12	0.01
Total – Services	1.09	1.00	0.21	0.92	1.01	0.07
Multispectral	2.23	-	0.01	2.54	-	0.03

Note: Refers to companies registered after 2008 and active as of 2012 (dubbed for simplicity as “Relevant”). The table shows:

- (i) Compound Annual Growth Rate (CAGR) in tax declarations and employment from 2008 to 2012 for relevant companies by subsector;
- (ii) Contribution, by subsector, of relevant companies to growth in tax declarations and taxable employment within the sector; and
- (iii) Contribution, by subsector, of relevant companies to overall growth in tax declarations and taxable employment.

Section 3. Newly Registered Companies and Exports

Rwanda's exports have grown significantly in recent years, and have kept within the 10-15 percent range of GDP. What has been the contribution of newly registered companies to this increase in exports?

To provide some context, the bulk of exports in Rwanda emanate from a handful of companies and products.¹⁵ Nearly 90 percent of exports are commodities traded on international markets. The remainder of exports largely (about 90 percent) go to Burundi and the Democratic Republic of Congo. These two export markets are distinct and have little overlap, and in recent years both markets have received new entrants.

Fresh capital injections through privatizations are likely to boost commodity exports. The privatization of large tea and coffee estates (Rwandex in 2009, Kitabi tea factory in 2009, and Mata tea factory in 2011) as well as the entry of other players into the sector is likely to have buoyed the productivity and value of commodity exports. A number of new entrants in the mining sector, which contributed the lion's share of new taxable employment, have had a similar effect.

New entrants from across the region boosted non-commodity exports. Non-commodity exports increased by 82 percent in value from US\$ 48.4 million in 2011 to US\$ 88.0 million in 2012, mainly due to an increase in the export of milling products, beverages, iron, and steel. New entrants from across the region, such as SteelRwa and Bakhresa, together with more seasoned Rwandan companies such as Inyange and Bralirwa (which registered long before the reforms), significantly boosted the increase in exports. The bulk of these non-traditional exports went to the Democratic Republic of Congo and Burundi (National Bank of Rwanda 2013).

In sum, the contribution of newly registered companies to the increase in exports would appear to be significant, particularly in non-commodities. The absolute magnitude of this contribution is an area for further study.

¹⁵ Relying on (Gathani & Stoelinga, Understanding Rwanda's Agribusiness and Manufacturing Sectors, 2012) and (Gathani & Stoelinga, Understanding Rwanda's Export Sector, 2012). figures cited in this section refer to cleaned customs figures for the year 2010.

Conclusions

This paper has analyzed new registrations and company-level tax records with a focus on three specific questions. First, of the large number of companies registered in recent years, how many are currently ‘formally’ active? Second, using the number of registered companies in a sector as proxy for interest, which sectors and subsectors have received the most attention from investors and entrepreneurs? Third, what has been the contribution of newly registered businesses to the overall economy in terms of taxes, tax-bearing employment, and exports, and how does this vary across sectors and subsectors?

This paper finds approximately 40 percent of registered companies (up to 2012) to be active. While this might seem low, the growth in newly registered and active companies is impressive — with approximately 9,300 companies added between 2008 and 2012, and approximately 1,000 additional companies expected to become active in 2013.

Registrations in the services sector have dwarfed the other sectors, comprising 75 percent of total company registrations. Within services, half of these registrations have been recorded in the wholesale and retail trade. There are a number of possible explanations for the dominance of trade in registrations. First, the move to diversify away from agriculture — particularly as retail trade constitutes a low start-up capital alternative. Second, increasing domestic purchasing power could justify growth in internal trade. Third, existing informal businesses may have decided (or have been strongly encouraged) to formalize their operations via registration.

Newly registered companies contributed 24 percent of the increase in tax declarations, with 19 percent coming from the services sector and 4 percent from industry. The contribution from the services sector can be explained by two factors: the large number of businesses in trade, and the entry into the market of major telecommunications operators. Industry is driven by the subsectors of mining, manufacturing, and construction. The marginal role of agriculture is likely due to its largely tax-exempt status.

Newly registered companies have helped to widen the tax base. Since 2008, a number of large companies have entered the market, which partly explains the large increase in tax declarations. The 10 leading newly registered taxpayers accounted for approximately one-third of additional declarations in 2012, with the rest coming from medium-sized newly registered companies.

Newly registered companies made a sizable contribution to employment growth. From a starting point of approximately 650 jobs, or 0.7 percent of taxable employment, the number of taxable jobs at newly registered companies increased 46-fold between 2008 and 2012, reaching 11 percent of the total and contributing 16 percent of the growth in taxable employment (with 7 percent from the services sector and 6 percent from industry).

The additional formal jobs and tax receipts generated are mostly attributable to medium and large sized companies. Despite their numbers, the contribution of small companies to tax declarations and taxable employment is limited.

Newly registered companies in mining and quarrying have delivered the highest number of new jobs. The increase in employment in industry is due to mining and quarrying (44 percent), manufacturing (22 percent), and construction (32 percent). In particular, a spurt in mining and quarrying has contributed to a 3 percent growth in total taxable employment.

Employment in mining and quarrying is highly concentrated, with the top 10 employers in 2012 contributing to 65 percent of the jobs in the subsector.

The services sector contributed to about 7 percent of the growth in taxable employment, with wholesale and retail trade accounting for approximately a quarter of that. Hotels and restaurants accounted for 17 percent, transport storage and communications delivered 13 percent, and real estate and business services came in at 20 percent.

Newly registered companies appear to have had an impact on exports. A number of privatizations and new entrants in the commodities sector injected additional capital into existing operations, while fresh entrants in manufacturing and agro-processing significantly increased the value of Rwanda's non-commodity exports.

Reading across the technical findings of this paper, four messages merit highlighting. First, easing the business registration process is a worthwhile endeavor. As this paper shows, newly registered companies made an evident contribution to formal job-creation, tax revenue and exports. Although it is not possible to say how much of this would have happened in the absence of the one-stop shop, it does appear that facilitation of business registration contributed to the real economy. Given that the entry of large and medium firms contributed disproportionately more than the entry of small firms, business registration simplification and investment promotion efforts geared towards such firms should be an important prerogative.

Second and relatedly, given the limited contribution of small firms, explicit formalizations drives would not seem cost effective. Efforts for micro and small firms could focus, for instance, on improving the business environment, increasing access to finance, lowering registration costs, and simplifying registration requirements, as the costs of explicit formalization drives are unlikely to be paid back in additional tax revenue.

Third, the large share of inactive or closed companies need not be a sign of concern as long as the share of active companies keeps growing. Churn is a physiological component of the economy – especially amongst small firms. As entrepreneurs experiment with new projects, fail and learn along the way, they contribute both to the real economy and to the accumulation of knowledge.

Finally, several shortfalls in Rwanda's otherwise impressive data collection efforts point to the importance of program design. The objective of the one-stop shop should be reflected in its data collection mechanisms, such that the program can be fairly evaluated, improved as needed and recognized in its merits. In this context, shortfalls in sector classification and in capturing re-registrations and formalizations mollify the conclusions that can be drawn from this analysis. First, since the sector in which a company operates is not recorded, the sector has to be imputed from the company's business lines. This is less than ideal. Second, while some re-registering companies have been excluded from the data, the complete list of re-registered companies was not available at the time of this study, creating uncertainty regarding its potential impact on the results. Third, as no effort is made to distinguish new registrations from formalizations, it is difficult to note how much this influences the findings.

A number of steps can be taken to improve this analysis. First, the Rwanda Development Board would benefit from recording the main activity, or the main subsector of operations of companies at the time of registration. Second, the availability of a list of re-registering firms would help to ensure that re-registering companies are not biasing the results of this

analysis. Third, greater attention should be paid to formalization. In this context, perhaps a survey of newly registered companies could help to gauge the depth of this phenomenon. Finally, the analysis could be expanded to determine the actual magnitude of the contribution of newly registered companies to exports.

Annex 1: Taxes on income in Rwanda

This annex provides a brief overview of the different income tax (personal and corporate) regimes present in Rwanda at the time of the study.

The standard tax regime: the “Real” regime

Rwanda’s standard tax regime, known as the “real” regime, charges a 30 percent tax rate on corporate profits — calculated according to a set of allowable deductibles. Profits recorded by sole-proprietorships, calculated using a similar method to that of corporations, are taxed according to a progressive scale: 0 percent between 0 and RwF 360,000; 20 percent between RwF 360,000 and RwF 1.2Million; and 30 percent above that.

Within the domestic tax department, large taxpayers are dealt with by a dedicated office — the Large Taxpayers’ Office. Large taxpayers consist of individuals, corporations, and government bodies and ministries that meet one or more of the following criteria: (i) their activities are complex and turnover exceeds Rwf 200 million per year, (ii) they pay excise duties, (iii) they are registered with the RDB and have invested over Rwf 300 million, and (iv) they are gauged to have growth potential and their PAYE costs exceed Rwf 600 million per year (Africa Development Bank 2010).

Small taxpayers’ regime – the “Lump Sum” regime

Taxpayers with an annual turnover of between RwF 12 and RwF 50 million can opt into a simplified tax regime consisting of a 3 percent turnover tax. This is known as the “lump sum” regime.

Very small taxpayers’ regime – the “Flat Amount” regime

Taxpayers with an annual turnover of below RwF 12 million can opt into a further simplified tax regime in which a flat fee is applicable according to the taxpayers’ estimated turnover band (see the table below for details). This results in an effective turnover tax of between 2 and 4.5 percent. Introduced in 2012, this regime is known as the “flat amount” regime.

Annual turnover	Fee in RwF
10,000,001 to 12,000,000	390,000
7,000,001 to 10,000,000	315,000
4,000,001 to 7,000,000	170,000
2,000,000 to 4,000,000	80,000

Recent changes to the income tax regime

The “flat amount” regime was introduced in 2012 together with two important changes to the “lump sum” regime. Until 2011 (i) the “lump sum” regime was applicable to all companies with a turnover of below RwF 20 million, and (ii) the turnover tax rate was 4 percent.

	2008 – 2011	2012
Real	All companies are eligible, no major changes	
Lump sum	<ul style="list-style-type: none"> • Turnover of below RwF20 million • 4 percent of turnover 	<ul style="list-style-type: none"> • Turnover of between RwF12 and RwF50 million • 3 percent of turnover
Flat amount	Not applicable	<ul style="list-style-type: none"> • Turnover of below RwF12 • Turnover based fee

Annex 2: Tax declarations, tax revenue and taxable employment

This paper relies heavily on tax declarations data to make inference on tax revenue and employment; this annex clarifies the relationship between the three.

Tax declaration data, unlike realized revenue, is available at company level, and can be checked against company registrations (see Annex 3 for detail). Although not perfect, there is a tight relationship between tax declarations and tax revenue at an aggregate level; with differences being accounted mostly by withholdings, pre-payments, arrears, VAT refunds, audit and post-audit adjustments, and fines.

This paper focuses on the three main tax categories: Corporate and Personal Income Taxes (CIT and PIT), employees' withholding taxes (or pay-as-you-earn, PAYE), and Value added Tax (VAT). The three constitute 70-80 percent of overall tax receipts, with the remainder accounted for by excise taxes, land, property and rent taxes, and charges applicable to roads and motor vehicles.

Due to the above mentioned discrepancies between tax declarations and realized revenue figures quoted in this paper do not exactly correspond to national revenue declarations. To avoid confusion, this paper refers to tax figures in percentage of overall declarations.

As tax declarations are only available from 2008 onwards, this paper focuses on the contribution of active companies registered after 2008.

Taxable employment

Using PAYE declarations, it is possible to quantify the number of tax-paying jobs (both permanent and casual) created by newly registered companies. As incomes below Rwandan francs (RwF) 360,000 per year are tax exempt, it is not possible however to quantify total job creation. This paper refers to incomes above RwF 360,000 as taxable employment.

Annex 3: Data Sources and Definitions

This paper makes use of two main sources of data: the Rwanda Development Board’s (RDB) company registration database and the Rwanda Revenue Authority’s (RRA) tax records. This section provides a brief description of each of the sources of data, data cleaning procedures, as well as the definition of basic indicators.

RDB business registration database

The RDB records the data of every new business, business line, or branch at the time of registration. It contains information on 32,250 companies, with a total of 140,146 registered business lines. Registrations date from as early as 1900; however data before 2006 was not considered. Most of the analysis presented here is focused on the 2008-2012 period, both for purposes of alignment with tax records, and also to coincide with the establishment of the one-stop shop and the business registration drives that took place in 2008.

Upon registration, companies are assigned a Taxpayer Identification Number (TIN), generated from the RRA, which is then used to match registrations and tax records.

Companies are requested to specify (to Industrial Standard International Classification [ISIC] level 4) all the activities that they will be undertaking (referred to here as business lines). However, the RDB has omitted to inquire what the main business focus of the company will be. Instead, this is imputed as the broad activity that appears most often among the registered activities.¹⁶ In absence of a clear activity, companies are classified as operating in multiple sectors. An example of how this is reported is illustrated in Table 1 below. The same process is followed for the subsectors.

Table 1: Example of Sector Classification

Company Code (illustrative)	Business Lines (ISIC4)	Main Business (imputed)
100	A0110	A – Agriculture, Crop and Animal production.
100	A0111	
100	A0112	
101	B0710	B – Industry, Mining of Metal Ores
102	A0110	Multiple Sectors
102	B0710	
102	C1102	

Note: ISIC = Industrial Standard International Classification.

Tax records

Tax declaration data is available at the company level from 2008 to 2012 on a yearly basis. This Paper makes use of declarations for Corporate and Personal income taxes, employees’ withholding taxes, value-added tax (VAT), and taxes on imports.

Although company level information is not available prior to 2008, a master list of all taxpayers is available, by year of registration, from the tax office.

¹⁶ In more technical terms, the main activity is the mode of the registered business lines for each business. “Broad activities” are defined to match Rwanda national accounting practices and are therefore slightly different from ISIC level 1 definitions.

Cleaning RDB's business registration database

A number of companies appear to have – for a variety of reasons ranging from tax accessing tax discounts to newly introduced regulations, and not fully investigated in this Paper – re-registered with RDB after the introduction of the one-stop shop in 2008. As these are not new companies, they need to be excluded from the analysis.

Any company registered with the Revenue Authority prior to registering with the RDB, is excluded from the analysis. Similarly, companies that registered with the RDB after 2008 and that had already filed taxes prior to registration, are also excluded from the analysis.

Upon closer inspection of the data — particularly concerning large taxpayers — a further group of companies are excluded from the analysis. This includes a manufacturing company operating in Rwanda since the mid-1980s, which had re-registered after 2008, as well as two large insurance companies with a split in their life and non-life businesses as a result of sector regulation introduced in 2010.

Defining economic activity

Formal economic activity is defined as any sort of interaction with the RRA. In defining whether an RDB-registered business is active, this study follows a three-step process.

First, using individual level tax declarations for the 2008-2012 period for corporate and personal income taxes, employees tax withholdings (PAYE), value-added tax, and import duties, a company is deemed “active” in a given year if in that year, it has registered any of the following activities:

- Recorded any turnover or operating expenses;
- Filed taxes for any of its employees;
- Made any input or output VAT declaration or requested a VAT refund for 0-rated goods;
- Paid import duty, VAT, or withholding tax on imports.

A company that fails to register any of these activities in a given year is deemed “inactive” for the year. This category also includes those companies that are present in the RDB's registration records but that do not show tax activity.

These steps result in an indicator of company activity for every year during the 2008-2012 period. It is important to note that being classified as an active taxpayer does not equate to making a positive tax contribution. Rather, it can be interpreted as having interacted with the RRA.

Second, a company maintains its “active” status if it registers consistent activity up to the year 2012. If a company has ceased activity at any point up to 2012, it is deemed to have “closed.” Companies that do not register activity in the 2008-2012 period are maintained as “inactive.” However, it is worth noting that this is the case for none of the approximately 97,000 taxpayers captured by the RRA. All the inactive companies in the study are RDB-registered companies that have never filed taxes.

A number of companies found to be fluctuating in and out of activity have been classified as “data issues” and kept distinct from the rest in order not to influence the results. This category remains comfortably small: just 2.8 percent of the total number of taxpayers and 0.4 percent of RDB-registered companies are classified as having “data issues”.

Table 2: Definition of Economic Activity

Year	Turnover or OPEX	PAYE	VAT	Duties	Yearly Status	General Status
Company 1						
2008	Yes	Yes	No	Yes	Active	Active as of 2012
2009	Yes	Yes	Yes	No	Active	
2010	Yes	No	Yes	No	Active	
2011	Yes	Yes	No	Yes	Active	
2012	Yes	Yes	Yes	No	Active	
Company 2						
2008	Yes	Yes	No	Yes	Active	Closed in 2011
2009	Yes	Yes	Yes	No	Active	
2010	Yes	No	Yes	No	Active	
2011	No	No	No	No	Inactive	
2012	No	No	No	No	Inactive	
Company 3						
2008	Yes	Yes	No	Yes	Active	Data issues
2009	Yes	Yes	Yes	No	Active	
2010	Yes	No	Yes	No	Active	
2011	No	No	No	No	Inactive	
2012	Yes	No	No	No	Active	

Note: OPEX = operational expenditure; PAYE = pay as you earn taxes; VAT = value-added tax.

Third, the status of economic activity derived in step 2 is then merged with the RDB registration database. Of the 29,180 companies registered in the period to 2012, 58 percent can be matched with tax files, thereby indicating an activity status. The remaining 42 percent are classified as “inactive.” To confirm that the lack of activity is the result of poor communication between the RDB and the RRA, the RDB registration database is matched with the RRA’s master list of all taxpayers. The match is excellent. Of all registered companies with the RDB, only 43 are not found on the RRA’s master list.

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